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Conflicting histories : the archaeology of the iron-working, farming communities in the central and southern coast region of Kenya.

CONFLICTING HISTORIES

The archaeology of the iron-working, farming communities in the central and southern coast region of Kenya

BY

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Abstract

East African coastal history is commonly presented within a homogenous and bounded framework. Hence archaeologists use ceramic typologies and ethno-linguistic correlates to define fixed cultural entities. Often restricted to specific geographical foci, these oversimplified constructs are used to extrapolate broader cross-regional statements about past socio-economic organisation and development. These statements have formed the basis for controversial and sometimes circular debates surrounding the issue of early Swahili identity and cultural origins. This study argues that such generalised histories reduce the inherent regional variability that is increasingly evident within the material past.

Archaeological evidence for settlement and subsistence change in the coastal hinterland of Kenya illustrates this point well. The existing cultural-historic framework has been dominated by the traditional coastal historiography surrounding Shungwaya. Briefly stated, this argues that the coastal hinterland region was only intermittently occupied, first by early iron-working, farming communities during the 3rd century AD, and again following the much later 16th century AD southwards migration of the contemporary Mijikenda inhabitants.

In contrast, intensive field survey has demonstrated a continuous and evolving iron-working, farming cultural sequence spanning the early first to late second millennium AD. Using a landscape based approach, changes in settlement size and location through time have now been mapped. In the same way, the excavation of five settlement sites has identified a corresponding variability in the associated material culture. The establishment of a revised ceramic typology, and new evidence for the changing patterns of local subsistence, both provide a picture of long-term regional development. Rather than identifying disparate and static so-called 'Iron Age' entities, the emerging evidence instead reflects a complex interplay of overlapping and dynamic social and economic continuity.

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Author's Declaration

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Bristol. This work is original except where indicated by special reference in the text and no part of this dissertation has been submitted for any other degree.

Any views expressed in the dissertation are those of the author and in no way represent those of the University of Bristol.

The dissertation has not been presented to any other University for examination either in the United Kingdom or overseas.

Richard Michael Helm

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Stage 1 Setting the Scene:

Existing knowledge and its Interpretation

Chapter 1 Introduction: the research background

'The trowel of the archaeologist is urgently needed to begin where the historian must perforce leave off' (Freeman-Grenville, G. 1962a: 2).

1.1 Introduction

Since the late 1950s, a considerable amount of research has concentrated on understanding the origins and development of the early urban Swahili settlements of the East African coast. Through a combination of archaeological, historical, linguistic and ethnographic data, their chronological depth, socio-economic organisation, and ethno-linguistic composition have all been sought (Sinclair, P. and S. Wandibba, 1988). However, this continuing narrative has been open to a multiplicity of conflicting historical interpretations, not least due to the competing claims of a long-established coastal historiography. Only recently have coastal archaeologists and historians stood back from these sources to provide an explicit critique of their veracity (Abungu, G. 1989; Chami, F. 1994; Horton, M. 1996; Mutoro, H. 1994/5; Pouwels, R. 1999; Spear, T. 1999; Wrigley, C. 1997). Hence attempts to define Swahili cultural history in terms of an external Arabic-Persian myth of origin have, with few exceptions (Mazrui, A. and I. Shariff, 1994), been rightly dismissed (Sutton, J. 1994/5).

With this shift towards an emphasis on the autochthonous nature of East African coastal society, both historians and archaeologists have focused their attention towards indigenous historical explanations. The equally problematic 'Shungwaya' origin myth has for some time been largely accepted as the 'standard history' of most Bantu speaking, northern East African coastal peoples (Nurse, D. and T. Spear, T. 1985; Spear, T. 1974; 1978, 1981a). Uncritically used by archaeologists and historians as a substitute for external 'Shirazi' claims (Allen, J. 1982a, 1982b, 1993; Horton, M. 1996; Pouwels, R. 1987; Shepherd, G. 1982; Wilding, R. 1988), the Shungwaya tradition has been referred to as one of the last great 'chimera' of East African coastal history (Willis, J. 1994). Despite some well voiced doubts (Morton, R. 1972, 1977; Willis, J. 1993; Walsh, M. 1992), its assumed historicity has been assured through the definite linguistic unity evident between the different ethnic groups who share Shungwaya traditions, and the general correspondence between such groups and their so-called 'independent' oral traditions.

Archaeological evidence from the coastal hinterland region itself has until recently been largely absent from this debate. This was partly due to the urban focus of coastal archaeology, which generated an artificial distinction between coast and interior (e.g. Chittick, N. 1967; 1984; Gramly, R. 1974; Kirkman, J. 1954; Posnansky, M. 1975). At the same time, it was due to the historical claim that coastal hinterland populations did not migrate south from Shungwaya until the later 16th century AD (e.g. Chittick, N. 1975, 1976; Kirkman, J. 1983; Soper, R. 1966b; Spear, T. 1974). Consequently, our archaeological knowledge has been fragmentary, both in time and in space. However, the search for autochthonous Swahili origins has, over the last decade, begun to provide a refreshing insight into the symbiotic role played by early coastal hinterland communities (Abungu, G. and H. Mutoro, 1993; Chami, F. 1994). This new archaeological evidence has presented some radically alternative perspectives to that promoted by the accepted 'standard' historical view (Pouwels, R. 1999).

This thesis seeks to build upon this emerging picture by focusing on the early first to late second millennium AD iron-working, farming communities of the central and southern coast region of Kenya (see figure 1.1). In doing so, it will act as a necessary bridge to the comparative archaeological data identified elsewhere on the East African coast. Citation of the existing literature here might well suggest an element of geographical bias; one which both epitomises and is largely responsible for the current controversial debate surrounding the autochthonous development of early coastal peoples (see section 1.2 below).

To the north of the study region, research has tended to concentrate in the hinterlands of coastal regions where there has been an earlier focus towards the excavation of urban coastal settlements. Thus archaeological survey along the Tana River valley (Abungu, G. 1989, 1995, 1998; Kiriama, H. *et al.* 1996; Phillipson, D. 1979) has supplemented work undertaken on the mainland and islands of the Lamu Archipelago (Abungu, G. 1988, 1989; Chittick, N. 1967, 1984; Horton, M. 1996; Kirkman, J. 1966; Mutoro, H. 1979; Wilson, T. and A. Omar, 1997), extending as far north as Mogadishu, in Somalia (Chittick, N. 1969b; Jama, A. 1996; Mussi, M. 1984; Sanseverino, H. 1983). In contrast, archaeological fieldwork to the south of the study region, particularly in northern and central Tanzania (Chami, F. 1994, 1998; Chami, F. and J. Msemwa, 1997a; Fawcett, W. and A. La Violette, 1990; Haaland, R. 1994/5; Kessy, E. 1997; La Violette, A. *et al.* 1989; Schmidt, P. *et al.* 1992; Soper, R. 1967b; Thorp, C. 1992) and Mozambique (Sinclair, P. *et al.* 1993), is seen to be primarily motivated by an interest in establishing long-term regional Iron Age cultural sequences.

The study region itself has received a comparatively poor archaeological coverage. Despite the identification and excavation of an early iron-working, farming settlement site at Kwale, south of Mombasa (Soper, 1966a, 1967a), there has since been no attempt to provide any systematic coverage of iron-working, farming settlement evidence.

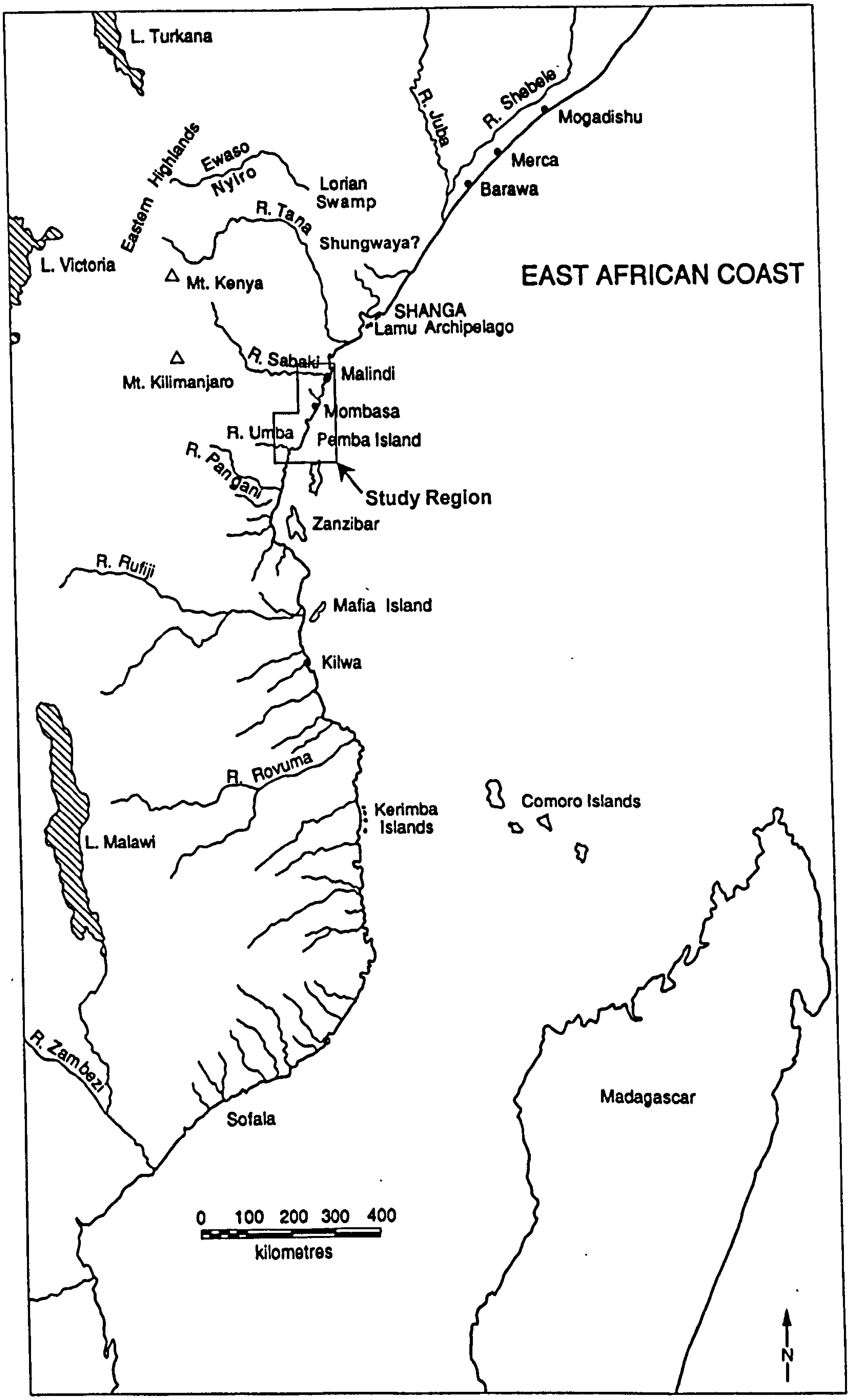

Figure 1.1 Map showing the location of study region in relation to the East African coast (after Horton, M. 1996: 2)

Soper's (1966a, 1966b) rapid, vehicle based survey established a general picture of a largely unoccupied coastal hinterland. This was seemingly justified by the historical interpretation of the Shungwaya origin traditions of the region's contemporary inhabitants, the Mijikenda (Spear, T. 1974, 1978). Such a pattern seems to have directly influenced later fieldwork. Hence survey along the Sabaki river valley of the central coastal hinterland of Kenya was described as *'unrewarding'* and of only provisional interest (Collett, D. 1985); although the area's rich archaeological potential is now beginning to emerge (Tinga, K. 1993).

Calls for an archaeological survey of the iron-working farming settlement in the central and southern coast of Kenya is not a recent phenomenon (Allen, J. 1974, 1977; Kirkman, J. 1983; Walsh, M. 1992). If the Mijikenda did come from Shungwaya in the 16th century, as historians would lead us to believe, then who occupied the region previously? Evidence for intermittent occupation by groups of stone-using, hunter-gatherers is recorded archaeologically (Omi, G. 1982, 1984, 1986, 1988, 1991; Soper, R. 1975; Thorbahn, P. 1979), and remnant populations of hunter-gatherer communities are still known to exist in parts of northern and southern coastal regions of Kenya today (Stiles, D. 1981, 1982; Walsh, M. 1990; 1992/3). Correspondingly, whilst the available evidence for early iron-working, farming communities of the early first millennium AD suggested a relatively short-lived and discontinuous occupation of the southern coastal hinterland, sporadic finds of later iron-working materials, would suggest that hunter-gatherer communities did not provide the only element of a pre-16th century AD population.

This was proved beyond doubt, following the work of Mutoro (1987; 1994) which specifically sought to explore archaeological evidence recovered from traditional Mijikenda '*Kaya*' settlements. These defensive and culturally sacred sites situated in forest clearings along the coastal upland ridge, are believed to have been established following the supposed migration of the Mijikenda from Shungwaya (see section 2.2). However, Mutoro's excavations identified ceramic materials which were characteristic of early coastal littoral settlements of the later first millennium AD. Such similarity was used to suggest a close interrelationship between early coastal Swahili and local hinterland populations (Abungu, G. and H. Mutoro, 1993). However, the data were less well received when they were used to suggest continuity of site occupation from the early first millennium AD to the present day (Sutton, J. *pers. com.*). Such a stand point would not only refute existing claims that the Mijikenda migrated from Shungwaya in the 16th century AD, but would also question some of the deeper underlying premises of East African coastal history.

1.2 Conflicting histories: the problems

A number of archaeological models are now available which explain the origins and development of coast and coastal hinterland communities in East Africa (Horton, M. 1996: 410-411). These are seen to both follow the standard view of East African coastal history, and diverge radically from it. The available evidence for each will be considered in greater detail in chapters 2 and 3. However, a review of the arguments underlying this multiplicity suggests that the discussion can be characterised by four recurring themes. These are briefly introduced below:

Theme 1: Chronological depth 'bridging the gap'

Our knowledge of the early East African coast was restricted by a seeming discontinuity in both the historical and archaeological records, until the development of early urban littoral settlements from the 8th century AD onwards. Early references to East African coastal peoples are made by Graeco-Roman sources of the 1st and 2nd centuries AD (Casson, L. 1989; Datoo, B. 1970; Huntingford, G. 1980; Kirwan, L. 1986; Mathew, G. 1975). However, there is a gap in further literary sources until the later arrival of Arab and Chinese visitors from the 9th and 10th centuries AD (Freeman-Grenville, G. 1962b; Trimingham, J. 1975; Wheatley, P. 1975). Similarly, although there is archaeological evidence for early iron-working, farming communities in the central and southern coastal regions of East Africa, their settlement appeared to have been both too late for any direct correspondence with the peoples of the 1st and 2nd centuries AD (Horton, M. 1990), and culturally unrelated to the later 8th century AD urban Swahili settlements of the coastal littoral (Collett, D. 1985).

Attempts to resolve this problem were compounded by a failure to recognise alternative evidence for coastal occupation during the mid-first millennium AD. Indeed, there seemed to be no available evidence for long-term cultural development until the 8th century AD (Connah, G. 1987; Sutton, J. 1990; Wright, H. 1993). Despite this, the existing data were freely used to extrapolate sometimes untenable reconstructions of early East African coastal history (for a review, see Pouwels, R. 1999). For the coastal hinterland of Kenya, such discontinuity was made even greater by the perceived late 16th century AD migration of the Mijikenda from Shungwaya (Spear, T. 1999).

Since the 1990s new data has allowed us to reassess this position. The recent identification of archaeological sites attributable to early iron-working, farming communities in the coastal regions of central Tanzania have now been found to date as early as the 1st century BC and as late as the 6th century AD (Chami F. and P. Masemwa, 1997a). Similarly, it has also been shown that these communities do share some cultural affinity with the later urban Swahili settlements of the coastal littoral (Chami, F. 1994, 1994/5; Haaland, R. 1994/5; Schmidt, P. 1994/5). Continued excavation of these early urban littoral sites have now demonstrated that overseas trade was in fact resumed at least as far back as the 5th and 6th centuries AD (Juma, A, 1996), and perhaps had continued from the time of earlier Graeco-Roman sources (Chami, F. 1998). Clearly then, this gap is now slowly being bridged.

Theme 2: Spatial focus 'the north – south dichotomy'

The earliest archaeological evidence for the development of urban Swahili settlement originally seemed to have been concentrated in the Lamu Archipelago of northern Kenya (Chittick, N. 1975, 1984; Horton, M. 1984; 1987a, 1987b, Pouwels, G. 1987; Sutton, J. 1990). This view both justified, and was itself supported by the emerging linguistic reconstruction of Swahili and other closely related Bantu languages (Nurse, D. 1983a; Nurse D. and T. Spear, 1985). Heavily influenced by Shungwaya traditions, it was argued that the Swahili, Elwana, Mwani, Mijikenda, Pokomo, and Comorian proto-language groups had all emerged from a proto-Sabaki language cluster by the late first millennium AD (Nurse, D. and T. Hinnebusch, 1993). This was believed to have taken place somewhere on the southern coast of Somalia, in the region later to become associated with the Shungwaya homeland (Spear, T. 1974).

However, to tie the proto-Sabaki language cluster into the larger group of North East Coast Bantu speaking peoples proved more problematical. The proto-North East Coast Bantu homeland was generally accepted to be located in north-eastern Tanzania. Thus an *en masse*, northern movement of the proto-Sabaki cluster was required to explain the later unity of the Shungwaya peoples (Nurse, D. and T. Spear, 1985). Similarly, to explain the emergence of a relatively homogenous Swahili urban culture along some 3000km of the East African coastal littoral, between southern Somalia and as far south as Mozambique, including the Comoros Islands and northern Madagascar, it was suggested that the Swahili later expanded rapidly southwards motivated by the economic gains from an ocean based trade (Horton, M. 1984: 266).

Again new research in central Tanzania has questioned this north to south expansion, through the identification of sites both contemporary to, and earlier than those identified in the north (Chami, F. 1998; Chami, F. and P. Msemwa, 1997a; La Violette, A. and J. Fleisher, 1995; Juma, A. 1996). Such a position calls for the revision of linguistic models that continue to support a northern proto-Sabaki homeland (Nurse, D. and T. Hinnebusch, 1993). Attempts to fit linguistic data to Shungwaya traditions of origin have been recently criticised (Hinnebusch, T. 1976a; Pouwels, R. 1999: 287-288; Walsh, M. 1992: 23-25), and there is now considerable justification for the *in situ* emergence of proto-Swahili, proto-Mijikenda and other Sabaki languages as they slowly expanded northwards from the North East Coast Bantu cluster (Spear, T.

1999 *pers. com.*). However, the absence of archaeological fieldwork in the central and southern coastal region of Kenya has prevented this debate from being fully resolved. At the same time it has allowed the search for a northern Swahili homeland to be simply replaced by an equally ascriptive southern one (Chami, F. 1998: 204).

Theme 3: Coast and interior relations

The development of an urban coastal littoral in East Africa is often explained within the context of transoceanic trade (Chittick, H. and R. Rotberg, 1975; Datoo, B. 1975; Horton, M. 1984; 1987a; Jones, A. 1971; Ricks, T. 1970; Shepherd, G. 1982; Sherif, A. 1981; Sutton, J. 1973). Whilst contacts with the Persian Gulf, the Red Sea, China and India are all well attested, the over-emphasis of these external trade connections has contributed to an artificial separation of the coast and neighbouring interior. Imported trade goods and monumental architecture were seen to justify a model of Arabic-Persian colonisation (Andersen, K. 1977; Chittick, H. 1965, 1974, 1977, 1984; Donley-Reid, L. 1990; Garlake, P. 1966; Kirkman, J. 1957b, 1963, 1964). This model emphasised the coastal littoral's separateness from the interior. This was further perpetuated by a misplaced perception of the poor environmental conditions encountered within the coastal hinterland (Abungu, G. and H. Mutoro, 1993: 695). As a result, the excavation and survey of the 'visible' urban coastal monuments was undertaken in virtual isolation from the 'invisible' rural settlements of neighbouring regions.

Recent attempts to correct this imbalance have contributed to a growing appreciation of the wider autochthonous network of social and economic ties that had existed between the littoral and hinterland communities (Abungu, G. 1995, 1998; Abungu, G. and H. Mutoro, 1993; Chami, F. 1994; Duarte, R. 1993; Fawcett, W. 1992; Horton, M. 1996). Most notable is the recognition of a shared ceramic tradition, alternately referred to as Tana Tradition or Triangular Incised Ware (TT/TIW) (Sutton, J. 1994/5: 228). Originally believed to have been a purely Swahili phenomenon, it is now clear that the local production of this pottery was not just restricted to the coastal littoral but is seen to extend several hundreds of kilometres inland. Such occurrences are not merely 'trading-posts' of outlying Swahili populations, but relate to a far more inclusive and multi-regional cultural identity (Chami, F. 1998; Horton, M. 1996: 409; Pouwells, R. 1999: 295; Schmidt, P. 1994/5: 261-262). Such a conclusion is supported by the comprehensive linguistic evidence for a degree of shared historical unity between the different proto-languages of the coastal Swahili and some northern coastal hinterland communities (Nurse, D. and T. Hinnebusch, 1993). However, at the same time the evolution of separate language groups reminds archaeologists that this seeming homogeneity underlies a more subtle spatial and temporal variability. Whilst there is no doubt that the TT/TIW pottery exhibits a definite basic unity, we should still be wary of accepting generalised statements which were originally derived from research undertaken from a geographically restricted perspective.

Theme 4: Ethnicity, language and culture 'who's who?'

As we have seen, an emphasis on the exogenous, colonial origins of the urban littoral settlement has now been replaced by an Africanist perspective which emphasises the role of local autochthonous development. However, attempts to identify the exact ethnic, linguistic and cultural origin of these early coastal communities have continued to generate considerable conflict between competing interpretations. The search for autochthonous origins was initially orientated towards the northern Kenya coast since it was here that the Swahili culture was believed to have first evolved (Abungu, G. 1989; Horton, M. 1984, 1987a). Influenced by the ideas of Allen (1983, 1984), an originally pastoral and probably Southern Cushitic speaking population was inferred. These were believed to have both established the initial trading networks essential for later 8th century AD urban growth, and provided the political backbone for a so-called Shungwaya state (Allen, J. 1993).

Although the coastal Swahili are recognised as Bantu speakers, the absence of archaeological evidence for Bantu speaking early iron-working, farming populations during the early first millennium AD did not correspond with Graeco-Roman references to 1st century AD seafaring coastal communities (Horton, M. 1990: 96). As a result, linguistic evidence was used to support the presence of a pre-Bantu stratum of pastoral Southern Cushitic speakers. These were then believed to have been later assimilated by the northwards expansion of the Sabaki Bantu language group (Ehret, C. 1980; Nurse, D. 1983b, 1988; Stiles, D. 1982). However, the crux of this scenario depended on the analysis of the local TT/TIW pottery. Certain attributes were seen to share close affinities with pottery collected from so-called Pastoral Neolithic sites of the Eastern Highlands and Rift Valley of Kenya (Abungu, G. 1989: 147-148). There appeared to be no similarity with the nearest so-called Early Iron Age regional ceramic variant identified at Kwale (Collett, D. 1985: 55; Horton, M. 1990: 96-97).

Contrasting with this view was a more straightforward model of linguistic and cultural continuity, which evolved directly from a Bantu speaking, iron-working and farming population base (Mathew, G. 1963; Nicholls, C. 1971; Nurse, D. and T. Spear, 1985; Phillipson, D. 1977, 1979). This has received a correspondingly greater degree of support by researchers working along the coast littoral and hinterland regions of central Tanzania (Chami, F. 1994, 1998; Haaland, R. 1994/5; Schmidt, P. 1994/5) and Mozambique (Sinclair, P. *et al.* 1993: 428; 1998 *pers. com.*) where evidence for the required early first millennium AD early iron-working, farming and presumed Bantu speaking population has now emerged.

Such data directly questioned the northern emergence of Swahili culture in the 8th century AD, and instead suggest the existence of a pre-Swahili TT/TIW cultural complex which gradually emerged from the early iron-working, farming communities of central Tanzania (Chami, F. 1998: 204). Arguments for the assimilation of an early Southern Cushitic speaking population by later Bantu speakers is no longer seen to be supported by the evidence for Southern Cushitic loan words recognised in proto-Swahili and other Sabaki languages (Nurse, D. and T. Hinnebusch, 1993; Pouwels, R. 1999). Furthermore, TT/TIW pottery excavated from the early coastal littoral and hinterland settlements consistently appears later in date to the Kwale Ware pottery of the Early Iron Age. This does not seem to support claims that the TT/TIW antecedents are to be found in a pre-Iron Age, Pastoral Neolithic population. Indeed, a reanalysis of TT/TIW pottery excavated from the central coast of Tanzania has suggested its gradual evolution directly from Kwale Ware (Chami, F. 1994; Haaland, R. 1994/5). This has been used to imply a shared ethnic, linguistic and cultural identity.

1.3 Research objectives: some unanswered questions

The foregoing discussion establishes a thematic framework around which the structure of this study can now be built. As was seen, research in the last decade has questioned the apparent discontinuity in East African coastal history and is beginning to broaden the spatial horizon of research through the recognition of regional heterogeneity. As such, coastal history is now no longer solely concerned with the urban Swahili. Instead, attention is increasingly focused towards understanding the emergence and identity of local autochthonous communities.

The southern and central coastal hinterland of Kenya is seen as an ideal region to continue this trend. A brief reconnaissance undertaken between January and February 1996 had established evidence for an extensive settlement distribution associated with iron-working, farming communities (Helm, R. 1996). Inspired by doubts expressed by Walsh (1992) and Willis (1993; 1996 *pers. com.*) regarding the nature and veracity of a Mijikenda migration event, the study was initially conceived to explore the archaeological evidence for Mijikenda migration and settlement. Through the evaluation of surface materials observed on sites historically associated with local Mijikenda oral traditions, the study both demonstrated that these sites commonly pre-dated the assumed 16th century AD arrival date of the Mijikenda from Shungwaya, and contrary to previous perceptions (*cf.* Mutoro, H. 1987) also provided the first evidence for an early and wide spread Mijikenda settlement outside of the traditional Kaya settlement. However, it was clear that the material culture identified on traditional Mijikenda sites did not necessarily provide a direct correlation with contemporary notions of Mijikenda identity. All materials observed were seen to be part of the broader

East African coastal TT/TIW ceramic tradition. How far then could the observed continuity in this material be directly equated with the development of an emerging proto-Mijikenda identity, and what implications did this have for the emergence of the urban Swahili? As we have seen, the Mijikenda, along with the Swahili, Pokomo, Elwana, Mwani and Comorian, are part of the Sabaki cluster of North East Coast Bantu languages. Could this unity therefore represent the gradual emergence and differentiation of the Sabaki speaking communities as they emerged *in situ* from their North East Coast Bantu 'homeland'? If claims for evidence of a direct cultural evolution between the early and later iron-working, farming communities in Tanzania (Chami, F. 1994) could be supported by comparative evidence from central and southern Kenya, it would provide a strong argument that this was indeed so (Pouwels, R. 1999).

However, the paucity of archaeological data has meant that these issues have remained conjectural. A more detailed and intensive archaeological survey has clearly been long overdue. The present study is therefore based on the results of the January to February 1996 reconnaissance survey, and a more detailed program of field work undertaken between December 1996 and September 1997. This incorporated a landscape based archaeological approach, which sought to escape the site-specific focus of previous research (Kusimba, C. 1993a; Mutoro, H. 1987; Omi, G. 1984; Soper, R. 1967a). The purpose was to generate a research strategy that would establish the first foundations for a comprehensive and representative regional survey of the changing human-modified landscape (McGlade, J. 1995: 14). This follows comparable research on iron-working, farming communities already undertaken in western Uganda (Maclean, M. 1996), Botswana (Segobye, A. 1994) and Mozambique (Morais, J. 1988; Pwiti, G. 1996; Sinclair, P. *et al.* 1993).

To achieve this aim, three objectives were pursued:

- ***Objective 1: identify and document new archaeological sites.*** Already some 130 archaeological sites are known to exist within the central and southern coastal region of Kenya (National Museums of Kenya Survey and Archaeological Sites Inventory, 1996). In addition, a further 72 traditional Mijikenda Kaya sites, and 18 traditional Mijikenda sacred groves have been listed both by botanists working to protect the surrounding remnant lowland rainforest (Hawthorn, W. *et al.* 1981; Robertson, S. 1987; Robertson, S. and W. Luke 1993) and by historians (Willis, J. 1996). Despite this, most of these sites have not been recorded in any detail. Of those that are, only a small handful have been excavated (Kirkman, J. 1952, 1954, 1963, 1973; Kusimba, C. 1993, 1995; Mutoro, H. 1987; Omi, G. 1984; Soper, R. 1967a, 1975). As such, they have been largely ignored in wider syntheses of East African coastal archaeology. To correct this imbalance, it was important that both a reassessment of existing sites and a representative survey of new sites be identified. These were to be adequately documented so that their cultural affiliation, relative chronology, and landscape situation could all be evaluated.

- ***Objective 2: establish a revised regional cultural sequence.*** The lack of a chronologically seriated material culture sequence for the study region has led to a dependency on comparative data derived from other regions (Chami, F. 1998; Horton, M. 1996; Wilson, T. and A. Omar, 1997). The collection of independent material was therefore sought to clarify this cultural sequence, providing a chronological cross-section through the early first to mid second millennium AD. Five sites were selected for small-scale, horizontal excavation to recover a stratified sample of cultural materials, supported by a sequence of absolute radiocarbon dates. The analysis of this stratified sample would then enable the assessment of social, economic and cultural change through time. Attention was specifically focused towards the establishment of a regional ceramic typology, and the analysis of faunal remains to explore the development of local subsistence economies.

- ***Objective 3: evaluate the existing local historiography.*** A legitimate revision of the region's settlement and land-use history must also recognise a degree of responsibility to the contemporary coastal hinterland communities, and their own perception of, and rights to that past. Whilst this study focuses on the interpretation of new archaeological evidence, it is also necessary to view this interpretation within the context of a traditional local historiography. Historians and anthropologists have given considerable attention towards understanding the evolution and organisation of Mijikenda social, economic and political identity. However, they have largely ignored the deep cultural awareness that the Mijikenda have of the historic landscape within which they belong (for some exceptions, see Parkin, D. 1991; Waaijenberg, H. 1994; Willis, J. 1996). The incorporation of this local knowledge was therefore seen to be an integral theme to archaeological survey (*c.f.* Hodder, I. 1992: 194-195; Raharijaona, V. 1989: 189-194). In this way, both perspectives could be utilised in the evaluation of the 'standard' coastal history.

The reconstruction of settlement and land-use history in the central and southern coastal hinterland of Kenya will directly influence the discussion of those themes raised in the wider interpretation of East African coastal history. Whilst this thesis does not claim to fully resolve, or escape the seeming circularity of those issues raised, the study will, from a regional level, contribute significantly to a critical reappraisal of these *'Conflicting Histories'*. However, progression in the interpretation of East African coastal history is not only achieved by improving the quality and quantity of the available data. Rather, it is the result of a complex variety of interacting factors, the outcome of which ultimately rests on the pre-judgements, or embedded assumptions, of the interpreter.

1.4 Theoretical perspectives: interpretation in archaeology

Reviews that seek to outline the general development of archaeology and history in Africa commonly emphasise the changing political context within which past research has often been undertaken. Broadly summarised, these include the shift from colonial domination (pre-1960s) to nationalist or neo-colonial domination following independence (1960s-1980s), and an Afrocentric or post-nationalist reaction (post-1980s) up to the present. Each stage exhibits particular political and ideological objectives in the production and dissemination of African history (for a full discussion see Abungu, G. 1989; Kusimba, C. 1993; Mapunda, B. 1995; Robertshaw, P. 1990; Schmidt, P. and T. Patterson, 1995). These are briefly characterised below:

- ***Colonial Interests (pre-1960s):*** A determination to identify the external non-African origin of the urban Swahili coastal littoral is seen to be congruent with the view that *'what we subsume under the word Africa is an undeveloped, ahistorical world'* (Hegel, 1965; 269, cited in Holl, A. 1995: 187). Colonial influence, both past and present, could be examined historically through external textual references, and archaeologically through the ample evidence for imported trade goods. In contrast, the non-literate, indigenous African, whose traditions and myths were unacceptable to the Western historical sciences were viewed as non-innovatory and static. Such an image of *'traditional'* African societies gave ample justification to the ruling colonial administration, which sought to *'bring the light and achievements of western civilisation'* to the *'poor and unfortunate'* African (Wilson, C. 1952; Holl, A. 1995).

- ***Nationalism (1960s-1980s):*** The nationalist movement set out with good intentions to break free from this colonialist paradigm. However, economic and academic dependency meant that a neo-colonial influence continued to predominate. A dominant interest in the non-historic 'Stone Age' period shifted, following calls by African historians, to explore the 'proto-historic' periods of African history (Robertshaw, P. 1990). As a result, archaeologists directed their attention to the 'Iron Age' period (Soper, R. 1971a-c), and historians sought justification in the use of local oral traditions to identify a specifically African history (Vansina, J. 1965). However, much of this research continued to be carried out by, and under the auspices of Western institutions, whose proponents maintained the traditional culture-historic framework (Robertshaw, P. 1990; Schmidt, P. 1995).

- ***Afrocentrism (1980s–present):*** Afrocentric ideology sought to escape from a dependency on Western academic institutions and theoretical assumptions; in effect, to correct the distortions and bias epitomised during the colonial and neocolonial periods (Kusimba, C. 1993). Early Afrocentric ideals, as embedded in the works of Chiek Anta Diop and Molefe Asante (*cited* Blakey, M. 1995), sought to identify a uniquely African epistemology to historical work. This was sought through a rebuttal of the existing ideas entrenched in Western ethnocentrism, and an escape from an academic dependency upon the 'colonial library' (Blakey, M. 1995; Holl, A. 1995). However, Afrocentric ideas ultimately grew from the same methodologies established in Western academic traditions of which they were attempting to deconstruct (Robertshaw, P. 1990).

Rather than replacing the assumptions underlying Western academic traditions, the shift from colonial to Nationalist and Afrocentric ideologies has instead continued to reinforce them (see Schmidt, P. and T. Patterson, 1995). At the same time, whilst western theoretical and methodological perspectives have continued to evolve (Trigger, B. 1984, 1989), the traditional culture-historic assumptions underlying earlier European colonial perspectives have become so deeply embedded in African history that it has proved difficult to break free from their influence (Hall, M. 1987a; Sinclair, P., T. Shaw and B. Andah, 1993). Hence the assumption that artefacts, as expressions of cultural ideas or norms, could be classified into homogenous cultural wholes and correlated with ethnic and linguistic units, and a corresponding reliance on migration and diffusion paradigms as explanations of change, have all been largely retained. Deconstructing such 'normative' concepts has continued to be one of the primary challenges facing the archaeology of African iron-working, farming communities in the 1990s.

The shift from culture-historic to processual or 'New Archaeology' in the 1960s had seemed to offer an escape from this problem (see Chami, F. 1994: 20). A greater emphasis on understanding past cultural behaviour in relation to environment, population, technology, social organisation and ideology underpinned a confidence that all data could be objectively studied using universal (all be it western) scientific methodology. The universal explanation of archaeological data was possible because the archaeologist observed material culture from an 'objective' location outside the data, which itself followed a common causality outside of the context from which that data had been recovered (see Binford, L. 1962, 1989; Clarke, D. 1968; Schiffer, M. 1976; Willey, G. and J. Sabloff, 1980).

Yet ethnographic and ethnoarchaeological research carried out within an African context (Hodder, I. 1982; Larick, R. 1986; Moore, H. 1986) questioned this empirical and positivist foundation. Interpretations of the past are never neutral, value-free or non-political. It is therefore important to drop any pretence of academic or scientific objectivity in our reconstruction of the past (Holl, A. 1995). Since the 1980s a reaction against processualism has dominated much of Western archaeological thought. Post-processualists argue that an 'objective' past is only achievable through data formed within a dialectical relationship with the subjective present. Not only do archaeologists need to understand the context of the data, but also the context of the archaeologist from which the data and interpretations are derived. Whilst the processualist framework placed emphasis upon the predictability, universality, repeatability and objectivity of archaeological reasoning, the post-processual framework has placed emphasis on the subjectivity of the interpreter, multiple interpretations, and indeterminancy (Hodder, I. *et al.* 1995). Post-processualism therefore requires questions be asked about what data has been used or suppressed within the dominant historiography and what assumptions have underlain the interpretation of this data.

The growing awareness to Third World input in the production and dissemination of World history has led to a gradual reappraisal of the First World, colonial and post-colonial perspectives (Layton, R. 1989a, 1989b; Ucko, P. 1995). Recent calls for the construction of *'alternative histories'* have been made to counter the existing domination of *'foreign interpretations of our history'* (Schmidt, P. and T. Patterson, 1995). Yet if these *'alternative histories'* are to be realised it is essential to recognise the hermeneutic relationship between interpretation and the theory-laden data in which each interpretation is inevitably embedded (Wylie, A, 1995). Dominant African histories continue to be constructed through and for a largely Western academic community. Through a post-processual epistemology then, this western perspective can be explicitly stated, and critically evaluated.

Hermeneutics (Greek=*hermeneuin,* meaning to interpret or understand) originated as an epistemology for the reading of textual material. It assumes that to interpret text correctly, one must also understand the social and mental context of the author (Johnsen, H. and B. Olsen 1992). Hence, the text, or any other data that make up the parts of a narrative, can only be interpreted through an understanding of that author. Ultimately, a dialectical and circular relationship is seen to exist between the parts and their interpretative whole:

> *'The part is understood within the whole from which it originated, and the whole is understood from the part in which it finds expression'* (Droyson, J. 1977; 35).

As with processualist archaeologists, early proponents of hermeneutics believed that it was possible to repress contemporary values and read a text objectively through the achievement of empathy with their past subject (Schleiermacher, F. 1986; Dilthey, W. 1986). This formed a single hermeneutic framework in which data and theory could be tested objectively against one another. However, in the social sciences, a double hermeneutic was recognised, where the context of the reader was also seen to affect his or her interpretation in a negative way, by becoming a source of prejudice or pre-judgement. Thus the double hermeneutic involved analysing the part-whole relations through a recognition of the prejudice embedded within the present context of their interpretation (Heidegger, M. 1962; Gadamer, H. 1977; Shanks, M. and C. Tilley, 1987). For post-processual archaeologists, a four-fold hermeneutic framework has been suggested (Shanks, M. and C. Tilley, 1987). Thus there is the hermeneutic of working within the contemporary discipline of archaeology, and the hermeneutic of living within contemporary society as an active participant. At the same time, there is the hermeneutic of trying to understand cultures different from our own, and the hermeneutic involved in transcending between the past and the present.

Recognition of this multiplicity moves towards the establishment of a reflexive framework through which underlying and often unstated assumptions, and their implication, might be unmasked. Interpretation involves the recognition of this interplay between multiple hermeneutics. However, the distance between different meanings within these multiple hermeneutics *'is not something that must be overcome'* (Gadamer, H. 1977; 264). By recognising prejudices in the present, interpretation cannot simply reproduce an historical objectivity. Rather, hermeneutics allows us to perceive both the interpreter's own historical location and the distance separating interpreter from subject as a productive precondition of understanding (Gadamer, H. 1977; cited Johnsen, H. and B. Olsen, 1992).

It has long been recognised that archaeological data, as material signs, are a text that when deciphered, can be read (Ricoeur, P. 1971; Hodder, I. 1982, 1989, 1991; Hodder, I. *et al.* 1995; Shanks, M. and C. Tilley, 1987; Tilley, C. 1990). The hermeneutic examination of the reconstruction of the past will allow us, then, to recognise and define the interpretative prejudice from which that past has been read. It will allow us to reconstruct a past, but that past is itself a construct of the present. In asking how can we interpret the past beyond our own contemporary prejudice, it encourages us to understand how we use archaeology in the construction of that past, and also requires that we be self-critical in our acceptance of any, often dominant, single narrative view. Whilst an objective past is unobtainable, the very nature of a reflexive hermeneutic approach ensures that the past which we disseminate will at least bring an awareness to it's inherent subjectivity, and in this sense, move a little closer towards understanding from where previous *'conflicting histories'* are derived.

Such reflexivity will be implemented through what has been termed the *'notion of coherence'* (Hodder, I. 1992, 1999). This seeks to identify the best-fit between data and interpretations, so that all will form a coherent whole. Through this coherence, the whole will remain responsive to change as both the data and therefore the interpretive process is modified, and renewed within the on-going and changing context of research. In this way, a hermeneutic epistemology does not mean that interpretation can be nothing more than a form of extreme relativism (Hodder, I. and R. Preucel, 1996). Rather than assuming an either/or dichotomy between *'conflicting histories'* the hermeneutic process will begin to allow the integration of those alternative interpretative views that are seen to best-fit all the different types of available data. Rather than asserting a single ascriptive and perhaps misrepresented view, it instead moves the debate forward towards the identification of future research questions as we seek to establish a coherent whole.

1.5 Identifying assumptions

The hermeneutic approach ensures that new research is undertaken from a perspective that encapsulates those assumptions which are seen to influence both past and present interpretations of East African coastal history. These are summarised in figure 1.2 below.

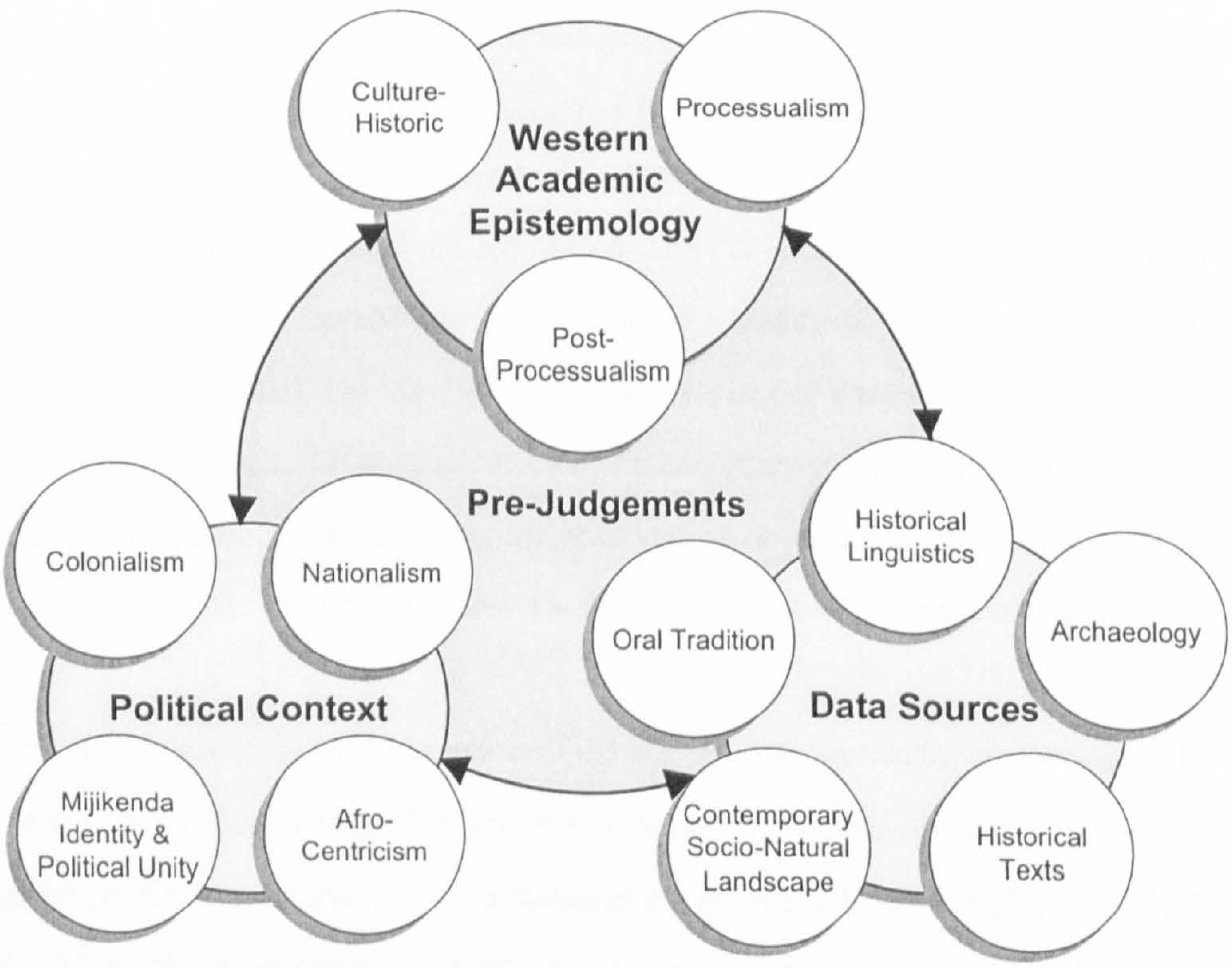

Figure 1.2 Summary of the influences shaping existing pre-judgements

As can be seen, existing pre-judgements are dependent upon a varied range of influences. None of these influences operate entirely independent of the others. However, at different times, different influences are seen to have been predominant.

It is argued that the conflict between standard and alternative histories of coastal East Africa is seen to have been shaped by this interplay between different pre-judgements embedded within the social, political and academic context of the interpreter. Most notable has been the changing political context through which Colonialist, Nationalist and Afro-centric ideologies have been framed, and the corresponding conflict which has evolved between different western academic epistemologies. It is equally necessary to explore how these perspectives have helped to form the existing knowledge base through which conflicting interpretations have been justified. As illustrated in figure 1.2, there are a multiplicity of sources available for reconstructing East African coastal history. These include archaeology, historical texts, oral traditions, historical linguistics and the role of the contemporary socio-natural landscape. Each source has exerted it's own unique influence on how this past has been read. The differences between sources create competing tensions through which our pre-judgements are both consciously and sub-consciously shaped.

Attention has already been drawn to the dissonance between an expanding archaeological record and the long-established coastal historiography (*cf.* Chami, F. 1994: 25-28; Horton, M. 1996: 1-4). The considerable dependency on Graeco-Roman sources for the early first millennium AD, and Arabic and Chinese textual sources for the later first and early second millennium AD is well known to have directly influenced the external colonial model of East African urban development. The uncritical acceptance of later local historical sources, notably the 16th century AD *History of Kilwa* (Chittick, N. 1974, 1975; Freeman-Grenville, G. 1962a) and the 19th century AD *History of Pate* (Chittick, N. 1969a; Freeman-Grenville, G. 1965; Werner, A. 1914/15) and *Book of the Zanj* (Cerrulli, E. 1957; Chittick, N. 1976), were all seen to justify this position, as did the recorded observations of early European explorers, missionaries, and colonial administrators. Archaeology was little more than a tool for historical verification.

Nationalist calls for the study of African history did not immediately rectify this position. Despite the initiation of the *'Bantu Studies Project'* by the British Institute in Eastern Africa (Soper, R. 1971a), which encouraged reconnaissance surveys to be undertaken in the coastal hinterland (Soper, R. 1967a, 1967b; Odner, K, 1971a, 1971b; Phillipson, D. 1979) the archaeology of the Swahili urban littoral continued to remain conceptually distinct from the interior. The retention of a culture-historic framework can be seen to have been motivated by a broader political interest in associating the past with those contemporary ethnic groups who constituted the newly independent Nation States (Schmidt, P. 1995). The ethno-historic reconstruction of contemporary Bantu groups, notably that of the Mijikenda (Spear, T. 1974, 1978), the Taita (Merrit, E. 1975), Kamba (Jackson, K. 1972) Kikuyu (Muriuki, G. 1974) Embu (Saberwal, S. 1967), Meru (Fadiman, J. 1973, 1993) Pare (Kimambo, I. 1969) and Shambaa (Feierman, S. 1974), all helped to reinforce the value of indigenous African history. Yet at the same time, they also continued to reinforce the colonial perception of ethnic and cultural separateness.

In the same way, archaeological research which sought to establish regional cultural sequences, primarily through the inter-site comparison of local ceramic typologies, inevitably became embedded in attempts to correlate 'archaeological cultures' with linguistic and by extrapolation, contemporary ethnic groups (Hall, M. 1984; Robertshaw, P. 1990). As with classic genetic models of language spread (Ehret, C. 1988a; Nurse, D. 1994/5, 1997; Vansina, J. 1995a), archaeology helped maintain a perception of bounded, monolithic and homogeneous entities through the definition of assumed packages of cultural traits (*cf.* Ehret, C. and M. Posnansky, 1982). Hence the spread of iron-working, farming and settled village life became associated with the expansion of Bantu languages and the eastern and southern Iron Age cultural complex (Huffman, T. 1970, 1982, 1989; Oliver, R. 1966; Phillipson, D. 1977, 1993; Soper, R. 1971a). In the same way, earlier aceramic stone technologies were commonly equated with possible remnant Khoisan hunter-gatherers, whilst ceramic stone technologies were associated with Cushitic, and Nilo-Saharan speakers of the so-called Pastoral Neolithic (Ambrose, 1982, 1984; Bower, J. 1984; Ehret, C. 1982; Robertshaw, P. and D. Collett, 1983; Schepartz, L. 1987). Based on the extrapolation of unconnected data across regions of archaeological *terra incognito* (Robertshaw, P. 1990), these associations are seen to have obscured the regional and local social complexity that is now increasingly evident.

Archaeological cultures can no longer be directly linked to language and ethnic identity (*cf.* Jones, S. 1996, 1997; Shennan, S. 1989). The constituent elements of archaeological cultures do not define discrete, homogenous units as previously hoped (Kiriama, H. 1993). Instead they are seen to form overlapping patterns with often unclear or gradual differentiation within and between different social groups. Hence there is a complexity of possible inter-relationships among different communities as the previously fixed distinctions between iron and stone-using, and agricultural, pastoral and hunter-gatherer life-styles are seen to be increasingly blurred (Maggs, T. and Whitelaw, G. 1991; Sinclair, P., T. Shaw and B. Andah 1993: 3-9). In this sense, it is necessary to move beyond the circular and ascriptive debate surrounding the pastoral or agricultural origins of the urban coastal development (Pouwels, R. 1999: 290). Similarly, the history of the iron-working, farming societies of the coastal hinterland is not just a Bantu history.

Rather it is a history of interacting relationships between varied and multiple cultural, linguistic, social and political spheres (Ehret, C. 1998; Vansina, J. 1994/5).

Interpretation must also be aware of the localised internal conflicts between competing interest groups, which themselves have helped structure the textured and interwoven mesh of alternative and often disjoined sources from which our data are derived. Of particular relevance here has been the conflict between local Mijikenda identity and the Swahili political hegemony of the coastal province, both during the colonial and later neo-colonial periods (Parkin, D. 1991; Willis, J. 1993). It has been suggested that Mijikenda unity was not so much structured by a shared origin from Shungwaya, but by a more recent need to provide a unified political voice which could speak to a colonial administrative system (Willis, J. 1993). Hence the historical identity of the Mijikenda was manipulated to reinforce their position within the changing political and socio-economic context of coastal life. Recently this history has rapidly gained both official and popular support. The national and international interest in the conservation of the Mijikenda Kaya forests, a growing interest in eco-tourism and increasing tensions over claims to land rights (Githitho, A. 1997; Groothuis, F. 1996; Luke, Q. 1992; Tunbridge, L. 1996; Wilson, A. 1993) have all greatly enhanced the social, political and economic value of Mijikenda cultural heritage. Indeed such interest might be seen to underlie the motivation for the establishment of a new museum display dedicated solely to the Mijikenda story of migration and Kaya settlement (Tinga, K. 1997 *pers. com.)*. Certainly, it is only through the Mijikenda's own interest and accompanying objectives, and by the continuous support of the Coastal Forest Conservation Unit, a joint World Wide Fund for Nature and National Museums of Kenya project to conserve the Mijikenda Kaya, that this present research has been undertaken. In this respect, it must also be stated that I myself am a product of the western academic community. As such my own views are ultimately restricted by an incomplete and outside understanding of the varied contemporary East African cultural perspectives that I have been fortunate to experience.

1.6 Outline of thesis structure

This thesis has been formed through three interconnected stages. Each stage is seen to represent the progression towards an interpretative whole, as movement through the hermeneutic process is made (see figure 1.3).

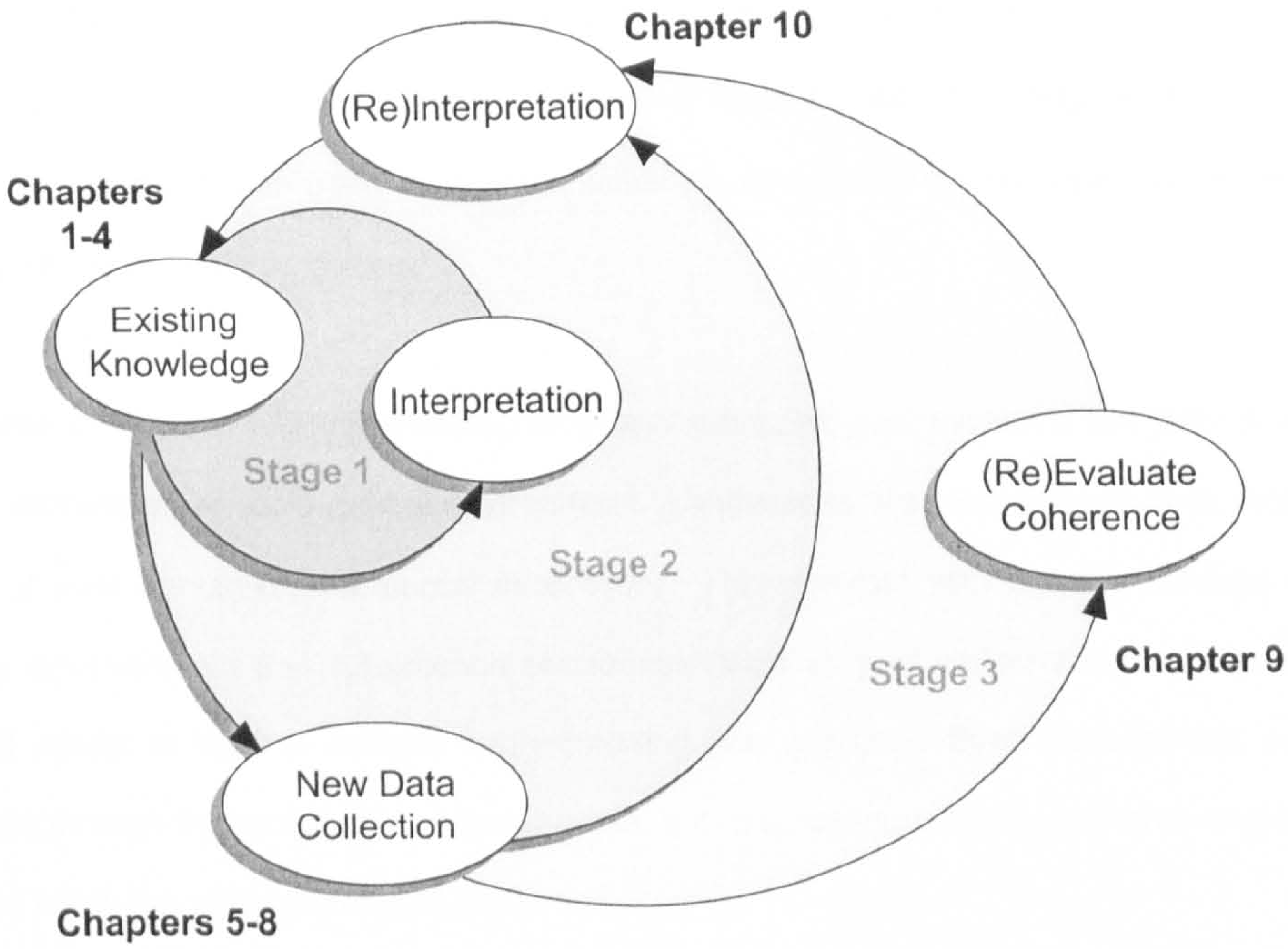

Figure 1.3 Hermeneutic summary outline of the thesis structure

Stage 1 Setting the scene: existing knowledge and its interpretation

The success of any new research strategy is dependent upon an understanding of existing knowledge and the associated pre-judgements that have helped shape their successive interpretation. This has been established in ***Chapter 1***, through a reflexive evaluation of the underlying themes, which were seen to motivate the objectives of this present study. Placed within a context of previous and existing theoretical perspectives, the influence of changing contemporary political, social and academic ideologies upon these accepted interpretations have been considered, and their relevance within a hermeneutic approach stated.

The results from previous research undertaken in coastal East Africa are considered in two separate parts. It is hoped that this will bring an increased awareness both to the often unstated assumptions underlying those sources from where our data have been recovered and to the inherent conflicts evident between alternative interpretative positions. In ***Chapter 2*** the ethno-history of the study regions contemporary Bantu-speaking, farming inhabitants, the Mijikenda is explored. Attention is specifically drawn to the historical reconstruction of their supposed migration and settlement from Shungwaya. As will be seen, this history is largely based on external historical texts, local oral traditions and linguistic history, with little reference to archaeological findings.

Chapter 3 therefore considers the results from previous archaeological fieldwork undertaken in coastal East Africa. Whilst a general cultural sequence for the last two millennia is now emerging, the data is still considered to be too-fragmentary to resolve many of those issues now being raised. As we have seen, much of this research has been interpreted within an ethno-historic and linguistic framework of distinct cultural and ethno-linguistic groups.

In ***Chapter 4*** both the existing historiography and archaeological evidence are placed within the study region's contemporary socio-natural environment. Landscapes are seen to have been modified within the context of past human-environmental interaction. This contrast with existing schema which seem to separate environments and subsistence economies (farming, pastoralism and hunter-gathering) within a bounded model of distinct cultural and ethno-linguistic groups. Such deterministic perspectives are countered through the recognition of the variable, but overlapping cultural, economic and social symbiosis that exist within the study region and beyond.

Stage 2 Collection of new data: survey, excavation and analysis

The results obtained from a programme of field survey carried out during January and February 1996, and December 1996 to September 1997 form the basis of Stage 2. In ***Chapter 5*** a statement of the field methodology and a critical evaluation of the field survey and its representativity is made. This is followed by an archaeological assessment of the spatial and relative temporal distribution of newly identified sites. These new data are incorporated within the existing known archaeological site distribution as outlined in Chapter 2. The result is a locational model based upon the observed socio-natural environments identified in Chapter 3. To assess local historiography, a comparative evaluation is also made of oral traditions and local perceptions of landscape history.

Chapter 6 reports on the excavation of five archaeological sites, identified during the field survey. Each site was carefully selected to provide a broad chronostratigraphic cross-section of the available settlement evidence from the c. 1st to 16th centuries AD. A formal description of the stratified deposits is given for each site and a preliminary interpretation made. The materials recovered from each site are discussed on a site by site basis. This chapter establishes the contextual background for the detailed analysis of the pottery and faunal data outlined below.

Chapter 7 provides a detailed analysis of the ceramics recovered from the five excavated sites. A review of the previous assumptions and methods used in East African ceramic analysis is given, and a revised methodological outline is suggested for this study. A multivariate correspondence analysis is made of the diagnostic sherds. Individual decorative elements (motifs) and their affiliate sets (based on vessel form, decoration format, surface treatment and fabric) are seriated with the excavated stratigraphic sequence. Intra and inter-site correspondence analysis is then used to explore evidence for typological continuity, both spatially (within Kwale and Kilifi Districts) and temporally (between c. 1st century AD 'Kwale Ware' and the early and later 'Tana Tradition' or 'Triangular Incised Ware' variants).

This is continued in ***Chapter 8*** with a discussion of the detailed analysis of faunal evidence recovered from the five excavated sites. The work was undertaken by Nina Mudida of the Department of Osteology, National Museums of Kenya. The discussion focuses on species variability between the five sites. The results suggest that the local subsistence economy developed from a largely hunter-gatherer economy around the c. 4th century AD, to an advanced agriculturally dependent economy by the 15th century AD. The findings are seen to corroborate arguments for continuity of settlement as set out in chapters 5 to 7. At the same time, the faunal evidence is also seen to reflect the differences between the socio-natural context of each site.

Stage 3 Towards a reflexive multi-interpretative framework

The final stage will bring together the data from both archaeology and historiography into a reflexive multi-interpretative framework. In ***Chapter 9***, both 'alternative' and 'dominant' histories are considered using the 'notion of coherence' (Hodder, I. 1992). Hence, interpretations will be examined, accepted, rejected, and new interpretations formed as the new data 'parts' are explored and their implication assessed. However, rather than establishing any singular and definitive reconstruction of the coastal hinterland history, this chapter will identify all interpretations which are acceptable within a hermeneutically defined 'whole'.

Finally, in ***Chapter 10*** the results from this regional study are placed into the wider interpretative context of iron-working, farming communities in East Africa. This will be incorporated within an assessment of future research recommendations and an outline of further research questions which were not satisfactorily examined, either due to a lack of supporting data, or because they fall beyond the confines of this research thesis.

1.7 Summary

This chapter has established an introductory overview of the themes inherent within East African coastal history. Alternative and sometimes conflicting histories have been identified which present a problematical framework in the reconstruction of this past. By focusing on a regional study of the iron-working, farming communities of the central and southern coastal hinterland of Kenya, this thesis seeks to provide a case study of the changing pattern of settlement and land-use since the early first millennium AD. Through a reflexive hermeneutic perspective, previous assumptions surrounding the interpretation of archaeological and historical data are questioned. The relevance of this hermeneutic process to this study is explored, and an outline of the thesis structure is then used to illustrate how these research objectives are to be achieved.

Chapter 2 Mijikenda historiography: migration and settlement

'In the end there will be two histories, theirs and ours. Ours will obviously be within a literate mode of historical thought, taking account of all the additional data we can muster to reconstruct sequential evolutionary patterns of change. It will satisfy us, while theirs continues to satisfy them' (Spear, T. 1981a: 178).

2.1 Introduction

The historiography surrounding local traditions of origin is one of the most problematical issues of East African coastal history. It has already been seen that a claim by the urban Swahili to have originated from Shiraz in Persia can no longer be taken literally. Rather the Shirazi myth is seen to have been an Islamic version of an earlier tradition of origin; that of the supposed East African coastal homeland of Shungwaya (Allen, J. 1982a, 1982b, 1993; Horton, M. 1984, 1996; Pouwels, R. 1984, 1987). Although post-colonial historians and archaeologists have been keen to accept the African roots of a pre-Islamic Swahili culture, it has proved equally difficult to establish exactly where or what Shungwaya was. Despite this, Shungwaya traditions are seen to have heavily influenced the later interpretation of both archaeological and historical linguistic data. Hence the perpetuation of a northern geographical focus and the seeming cultural discontinuity created by later migrations have all been problems partly shaped by historians' readings of the Shungwaya tradition.

Whilst there is little direct evidence for the historical veracity of Shungwaya, the occurrence of Shungwaya in the traditions of many disparate, but related peoples has ensured that its significance to early coastal history remains strong (Pouwels, R. 1987: 10-11). Briefly summarised, these traditions all tell of a series of migrations from a central region north of the Tana River, which according to the chronology established by historians, largely took place in the 16th century AD. They tell how the Bantu Sabaki speaking Mijikenda, Pokomo, and Swahili, along with the Taita, various Somali and possibly other peoples all lived collectively together at Shungwaya. Of how the Swahili through interaction with Arab traders first spread southwards along the coastal littoral. And how later, following the aggressive expansion of Eastern Cushitic Oromo (Galla) pastoralists, several of these Shungwaya groups unable to defend themselves, were forced to follow (Pouwels, R. 1987; Nurse, D. 1994; Nurse, D. and Spear, T. 1985; Spear, T. 1978, 1982).

Perhaps the best-recorded traditions of Shungwaya, and the most relevant to this study region, are those recalled by the Mijikenda. The name Mijikenda is a modern ethnonym for nine closely related, but distinct groups of Bantu Sabaki speaking, farming peoples, once indiscriminately referred to by the derogatory name of *'Wanyika'*, literally meaning *'peoples of the bush'* (Prins, A. 1952: 35). Hence the Giryama, Kauma Chonyi, Jibana Kambe, Ribe, Rabai, Duruma and Digo peoples are all collectively known as Mijikenda[1]. The Mijikenda have received considerable attention from European explorers (notably Emery, Guillain, Burton, Owen), missionaries (for example Krapf, Rebmann, Erhart, Taylor, Wakefield, New, Sharpe), colonial administrators and later ethnographers (for example Hollis, Griffiths, Champion, Dammann, Fitzgerald, Kayamba, MacDougall, Pearson, Prins, Werner). The resulting ethno-historic framework, most cogently argued by Spear (1974, 1978, 1982), has been largely accepted as the standard history in both academic and popular literature alike (for example, Abungu, L. and K. Tinga, 1998; Andah, B. 1995; Brantley, C. 1981; Chittick, N. 1975; Mwangudza, J. 1983; Nurse D. and Hinnebusch, T. 1993; Ochieng, W. 1985; Parkin, D. 1991; Pouwels, R. 1987; Waiijenberg, H. 1994; Wilson, A. 1993).

However, Mijikenda traditions are seen to be more than 'simple historical truths'. Whilst the close linguistic and cultural similarities of the Mijikenda clearly represent a certain degree of long-term interrelationships, their shared traditions of origin also act as a tool in the legitimisation of their contemporary political unity. *'The Mijikenda are the Mijikenda because they come from Shungwaya'* (Willis, J. 1993: 31) is a claim made by the Mijikenda themselves to reinforce their own historical position in 20th century coastal life. As with Swahili claims for Shiraz origins, the Shungwaya tradition should not necessarily be taken as strictly historically accurate. Rather, it is a *'cultural charter'* which helps to reinforce both their own internal contemporary identity, and their external relationships with others (Spear, T. 1974: 69).

How far then can we accept the standard view of Mijikenda migration and settlement? In the past, the archaeological evidence from the coastal hinterland region of present day Mijikenda habitation was inadequate to either support or refute Shungwaya traditions. Yet as outlined in Chapter 1, historical doubts as to how far contemporary Mijikenda identity can be transposed into the past (Morton, R. 1972, 1977; Walsh, M. 1992; Willis, J. 1993, 1996), and new archaeological results from the excavation of Mijikenda sacred Kaya settlements (Mutoro, H. 1987) would seem to question Spear's (1978) historical reconstruction. This chapter will therefore review this standard Mijikenda history and identify those weaknesses that are seen to break its seemingly neat interpretative coherence. In this sense, the discussion will reopen the debate towards a new reflexive framework in which its broader implication to regional East African coastal history can be more satisfactorily assessed.

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[1] Note that the term Mijikenda, and the names of each Mijikenda group are all given in their Swahili forms. Variants in the vernacular are as follows: *Midzichenda* (Mijikenda), *Dzihana* (Jibana), *Rihe* (Ribe) and *Rahai* (Rabai) (Spear, T. 1978: 14, note 4).

2.2 The standard history: 'we came from Shungwaya'

Utilising a combination of oral, historical, cultural and linguistic evidence, Spear's model of Mijikenda migration and settlement emphasises the seeming correspondence between disparate Shungwaya traditions, European and Swahili textual sources, shared cultural traits and a common Bantu Sabaki language. Following the traditions, Spear maintained that the *Kashur* peoples of Shungwaya, as they were then known, did at one time live together on the southern coast of Somalia, perhaps as far north as Brava (Spear, T. 1978: 21-27). Here, following the expansion of the Swahili, the proto Mijikenda, Pokomo, and Taita groups remained for some 700 years until a dispute with neighbouring Oromo pastoralists caused a violent conflict, forcing the Bantu speaking farmers to flee southwards (Nurse, D. and Spear, T. 1985). The first to leave, the southern Mijikenda Digo, thus reached the Shimba Plateau, south east of Mombasa (Spear, T. 1978: 27-30). The Pokomo, who settled along the Tana River valley and the Taita, who moved inland up the River Sabaki (Galana) to the Taita Hills soon followed. With them were the northern Mijikenda, who continued south to establish a number of separate settlements along the coastal hinterland between Malindi and Mombasa (Spear, T. 1978: 30-33) (see figure 2.1).

Although the Mijikenda traditions are by far the most comprehensive (especially Barrett, W. 1911; Champion, A. 1967; Dammann, E. 1944; Gerlach, L. 1961; Griffiths, J. 1935; Hobley, C. 1922/3; Johnstone, H. 1902; Kayamba, H. 1947; Prins, A. 1952, 1955a; Spear, T. 1982; Werner, A. 1915), Spear also used Shungwaya traditions from other groups to verify the Mijikenda case. These included traditions from other North East Coast Bantu speaking groups including the Bajuni and Mwini of coastal Somalia (Elliot, J. 1925/6; Nurse, D. 1994), the Pokomo of the Tana River (Abungu, G. 1989; Bunger, R. 1973; Werner, A. 1913); the Segeju (Baker, E. 1949; Dammann, E. 1936/7; Hollis, A. *n.d*, 1900; Wakefield, T. 1870) and lowland Taita (Merrit, E. 1975) of inland southern Kenya; and the Kilindini and Jomvu Swahili of Mombasa (Cashmore, T. 1961; Guillain, C. 1856; Lambert, H. 1958; Prins, A. 1952). At the same time he was also aware of those traditions collected from the Oromo (Galla) pastoralists themselves (Cassanelli, L. 1982; Lewis, H. 1966; Turton, E. 1975), as well as the Eastern Cushitic, but probably originally Southern Cushitic speaking Boni (Aweera), Dahalo and Waata hunter-gatherers (Prins, A. 1960b; Stiles, D. 1980; 1981).

Spear was particularly cautious of accepting all Shungwaya traditions blindly. It was apparent through contradictions in the collected traditions, as well as from the emerging historical linguistic picture, that not all people who claimed Shungwaya origins could have lived there. Earlier attempts to establish Shungwaya as a Bantu dispersion centre were grossly exaggerated (Freeman-Grenville, G. 1963: 130;

Huntingford, G. 1963: 89-90; Kimambo, I. 1973; Lambert, H. 1950; Mathew, G. 1963: 103; McIntosh, B. 1968: 200-202; Prins, A. 1955a, 1955b, 1972; Were, G. 1974). Hence attempts to attach Shungwaya traditions of origin to the Pare, Bondei, Shambaa and Zigua of north eastern Tanzania, and the Chuka, Embu, Kamba, Kikuyu, Mbeere, Meru and Tharaka of the central Kenya highlands around Mount Kenya, were all seen to be doubtful (Berger, I. 1967; Jackson, K. 1972; Munro, J. 1967; Muriuki, G. 1974; Saberwal, S. 1967; Sedlak, P. 1977; Spear, T. 1982; 5-6).

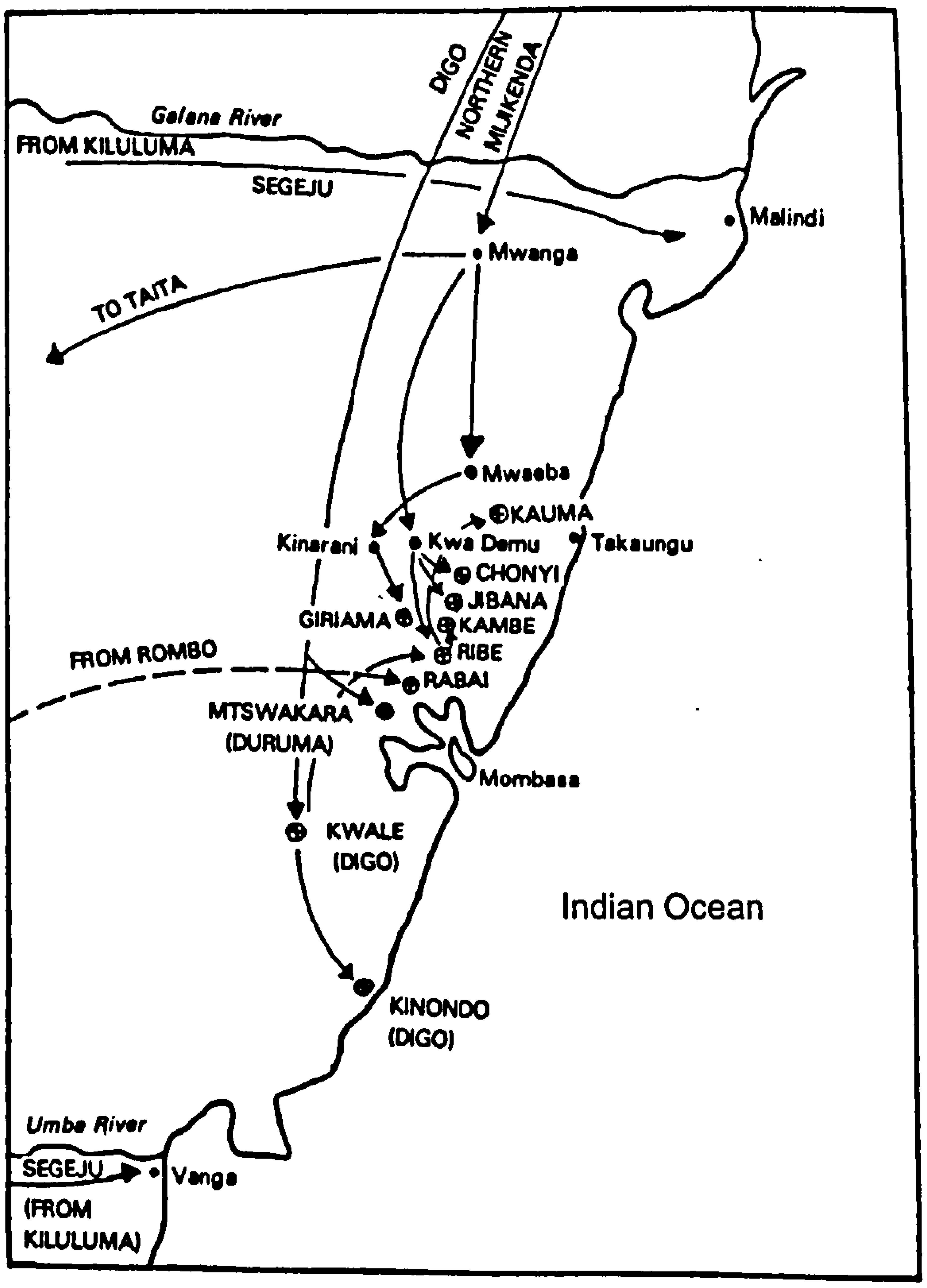

Figure 2.1 Map showing the Mijikenda migration route and settlement (from Spear, T. 1978: 28)

Similarly, with the more established traditions of the Segeju, as well as with the Mijikenda Duruma and Rabai, Spear recognised that the claim for Shungwaya origins had perhaps been incorporated through a process of later assimilation (Spear, T. 1978: 33-37). Hence the Segeju, were originally seen to be Daiso (Thagicu) speaking 'pastoralists' from Kiluluma in the central highlands of Kenya. These moved along the Sabaki (Galana) River to Malindi, and later reappeared in the Usambara Mountains in north east Tanzania and near Vanga on the southern coast of Kenya, where they assimilated with local Digo (Mckay, W. 1975). The Duruma were seen to have originated from a heterogeneous blend of Digo peoples and later Kamba and Makua refugee slaves (Griffiths, J. 1935; Guillain, C. 1856; Johnstone, H. 1902: 263). As for the Rabai, they had alternative traditions that claimed an earlier origin from Rombo, near Mount Kilimanjaro (Harries, L. 1961: 145-147).

As each of the proto-Mijikenda groups differentiated, they established traditional defensive Kaya settlements to guard against further Oromo aggression. According to Spear (1978: 46), initially six separate Kaya were founded, a figure which later expanded to nine as the Kauma split from the Ribe, and the Rabai and Duruma peoples were finally assimilated. Each Kaya was formed within a large clearing surrounded by dense bush or forest and reached by following a narrow entrance pathway (*mviryaa*), guarded with protective charms (*fingo*) and multiple fortified wooden gateways (see figure 2.2).

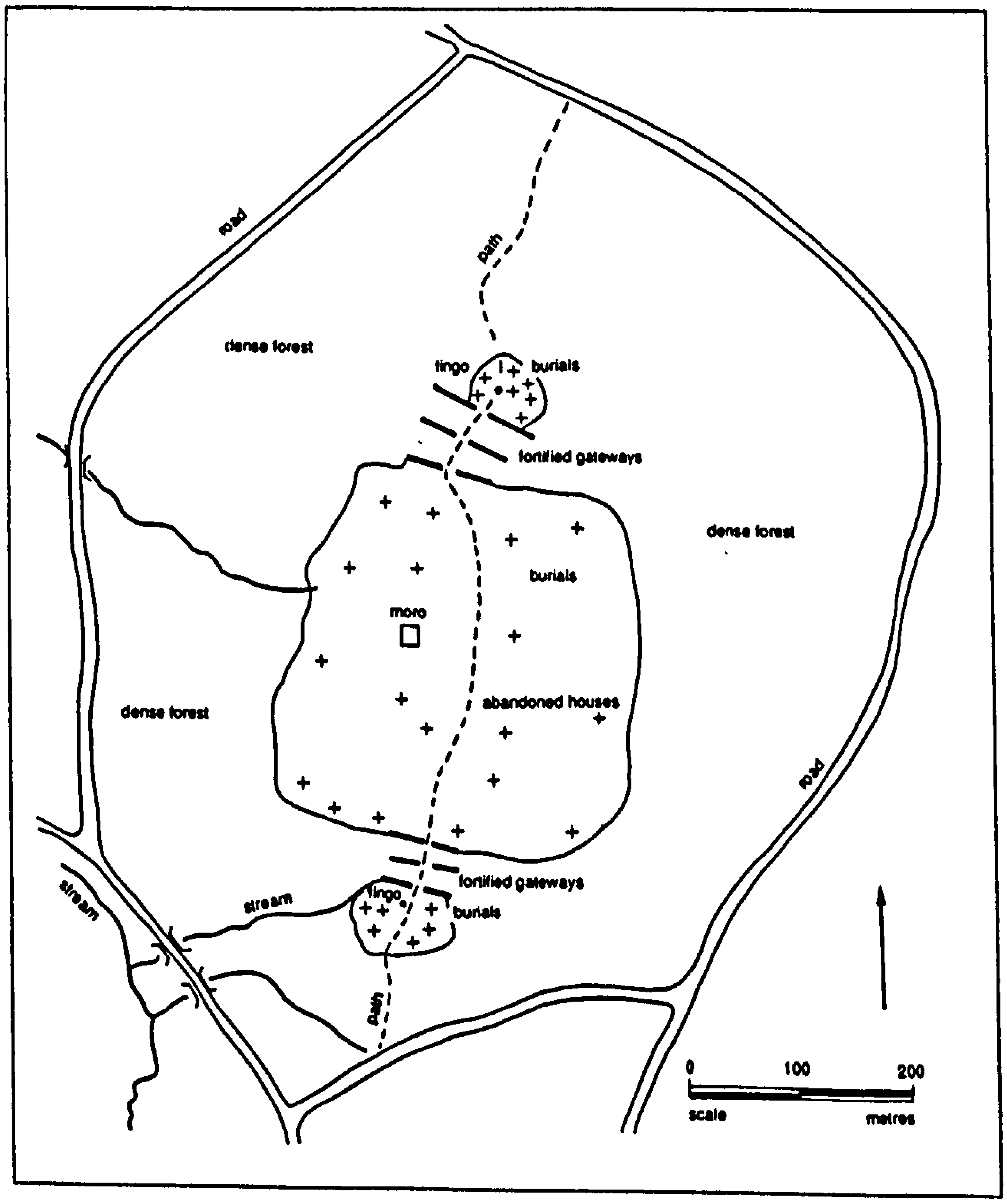

Figure 2.2 Plan of Kaya Singwaya (from Horton, M. 1996: 85; after H. Mutoro, 1987: 170)

The internal spatial structure of each Kaya, was that of a central ritual enclosure (*moro*) surrounded by the individual demes of each of the Kaya's constituent clans (*mbari*). Whilst exhibiting a degree of internal variability all are believed to have mirrored the essential structure of Shungwaya (Allen, J. 1993: 86; Mutoro, H. 1987: 45-50; Spear, T. 1978: 49; Willis, J. 1996).

Protected within each Kaya, the traditional institutions and cultural practises, which had been undertaken at Shungwaya, were believed to have been maintained through the controlling influence of the elders (Spear, T. 1978: 49). Hence the Kaya became a foci for all that had been retained from Shungwaya. Whilst Spear (1978: 49) recognised the existence of 'subsidiary' Kaya, particularly by the Digo, whose individual clans exhibited considerable independence from one another in contrast to the northern Mijikenda, the political and sacred centre of each Mijikenda group ultimately remained with these nine 'primary' Kaya.

Perhaps due to a recognised lack of data, this static cohesion was perceived to have continued unchanged until the early 19^{th} century AD (Brantley, C. 1981; Spear, T. 1978: 44-79). Then, with the growing commercial opportunities offered by trade with the Mzarui-Omani Arabs of the coastal littoral, younger members had new opportunities to assert their independence from the traditional gerontocratic control seen within the Kaya (Brantley, C. 1978). By leaving its security to establish their own homesteads elsewhere, individuals were able to accrue considerable economic power for themselves (Willis, J. and S. Miers, 1997). The result, as most Mijikenda elders will agree, was a period of social disorder as the traditional institutions fell into decline, the communal power of the elders was weakened and their cohesive identity, originally focused on each Kaya was slowly broken apart (Spear, T. 1978: 80-132).

2.3 Mijikenda historical identity: the present past

Spear (1974: 70) asserted that the Mijikenda traditions of origin could be read as accurate historical narratives, justified through the apparent independent consistency amongst all Shungwaya peoples. Yet it has been this very consistency which has led to the questioning of their historical veracity. Spear (1974: 70) argued that because the Mijikenda have each been settled separately within their individual Kaya for the last 350 years, the independence of each group's traditions is assured. Similarly, he argued that because this historical narrative has little or no functional relation to contemporary Mijikenda culture, the traditions have diverged only slightly over time (Spear, T. 1974: 70). Whilst they are not themselves primarily used for historical purposes but as socio-cultural 'charters', they still contain a complex and coherent historical narrative (Spear, T. 1974: 74).

Yet Spear's history assumes that past Mijikenda social discourse was both static and isolated. In contrast, contemporary social historical studies of Mijikenda society have all illustrated the competing conflicts evident between the sometimes idealised view of traditional Mijikenda practice, and the changing context of internal and external social, economic and political pressures (Brantley, C. 1979, 1981; Herlehy, T. 1984; Ng'weno, B. 1995; Parkin, D. 1972, 1989, 1991; Sperling, D. 1988; Waiijenberg, H. 1994; Willis, J. 1993, 1996; Willis J. and S. Miers, 1997). To assume that similar issues were not raised in the pre-colonial situation is clearly reductive. Spear did not fully explore the likelihood of interdependence amongst Shungwaya traditions (Pouwels, R. 1999: 293), but instead assumed a certain degree of separateness between what were seen to be discrete entities. Such a view prevented any perception of the dynamic and autochthonous past which both Shungwaya traditions and the contemporary evidence would seem to suggest.

The first real doubts about the veracity of Mijikenda traditions were expressed by Morton (1972, 1977). Recognising that there was no direct evidence for the association of the Mijikenda with Shungwaya prior to 1897, Morton (1972) suggested that their claim to have originated in Shungwaya was a fabrication promoted by the coastal Arabs and Swahili. Its purpose, according to Morton, was to justify the role of Arabs and Swahili as intermediaries between the Mijikenda and colonial British, who had sought to ban the Mijikenda practise of pawning women and children to coastal towns during periods of famine. Morton based his arguments on the critical reading of a 19^{th} century Swahili chronicle, the *Book of the Zanj* (Cerulli, E. 1957: 253-266; Prins, A. 1958:11), which in his view was purposefully written to legitimise the Arab-Swahili hegemony of the agricultural Bantu communities of the coastal hinterland (Morton, R. 1972). Morton's argument was not widely accepted because the historical evidence for Shungwaya, whilst not specifically relating to the Mijikenda, was seen to go back as far as the 16^{th} century AD (Allen, J. 1981a, 1983; Chittick, N. 1976; Spear, T. 1974; Walsh, M. 1992). However, his underlying assumption, that the consistency exhibited in Mijikenda historiography illustrated its essential functionalism, is still very real.

Instrumentalist views on the manipulation of Mijikenda historical identity are most cogently argued by Willis (1993), and Willis and Miers (1997). By exploring Mijikenda family histories, they have shown how the breakdown in the ritual and political authority of the Kaya recorded in the standard history, was reinforced through the incorporation of newly dependant outsiders into the families of homestead leaders. In this way it provided newly emergent entrepreneurs with followers independent of the traditional control of clan elders. However, with the colonial abolition of slavery, both the fluidity of the more traditional forms of social obligation and patronage that had existed between themselves and the coastal Swahili, and their new found ability to control their own attached 'slave' dependants diminished. As a result the possibilities for incorporation were reduced and the proto-Mijikenda found themselves both isolated from the Arab and Swahili controlled coast and unable to maintain their previous patronage of their dependent classes (Willis, J. 1993; Willis, J. and S. Miers, 1997). To counteract this, they sought to unify their political position within the confines imposed by the British colonial system, through the adoption of a common 'tribal' identity. In this way, the newly defined Mijikenda were able to redefine their own social and economic network through a claim of common origins, a shared history and close kinship ties which enabled them to act collectively as a whole (Willis, J. 1993: 201-202). Thus the seeming unity between different Mijikenda groups is seen to represent nothing more than the contemporary redefinition of socio-economic relationships. For Willis then, these contemporary relationships should not be extrapolated into the past: the Mijikenda '*were not otherwise a distinct and unified group, in terms of history or cultural practise*' (Willis, J. 1993: 6).

2.4 Shungwaya, migration and Mijikenda settlement: a critique

If the assumption of Mijikenda historical unity is now in dispute, so to is the notion of Shungwaya and the evidence for an actual migration event (Walsh, M. 1992). Shungwaya, or '*tsingwa ya*', meaning '*other peoples land*' (Pakia, M. 1996: 8) has been one of the great '*historical chimera*' of coastal historiography (Willis, J. 1994:147). Despite the significance of Shungwaya to those communities who claim it as their original homeland, neither its exact location, or ethno-linguistic make-up have ever been conclusively established.

Collected oral traditions whilst referring to Shungwaya, only do so vaguely. Shungwaya is commonly located anywhere between the Juba and Webi-Shebelle Rivers in southern Somalia, to the mouth of the Tana river, opposite the Lamu Archipelago in northern Kenya (Burton, R. 1859; Elliot, J. 1925/6; Fitzgerald, W. 1898; Guillain, C. 1856; Ravenstein, E. 1884; Werner, A. 1915). It is again uncertainly recorded in various localities on early European maps of the 16th and 17th centuries AD (Linschoten, 1596; Plaenn, 1640; Blaeu, 1662; Dapper, 1668; Ogilby, 1670; de la Feuille, 1700). Indeed a contemporary Portuguese expedition failed to locate Shungwaya in 1686/87, despite the seeming role it played in northern coastal politics (Strandes, J. 1962: 204, 207). Whilst the *Book of the Zanj* identified Shungwaya with the town of Bur Gao, on the coast of Somalia (Grottanelli, V. 1955), archaeological reconnaissance has provisionally shown that this site was both too late (post 1400 AD) and too small for it to be the Shungwaya remembered in oral traditions (Chittick, N. 1969b: 124-130; Sanseverino, H. 1983: 163-164).

The inherent variability evident within these sources would suggest that Shungwaya never was a single settlement or town. Rather, it would appear to have been a region made up of several settlement localities, the extent of which must have incorporated a multiplicity of ethno-linguistic communities who were both socially and economically interconnected (Nurse, D. and T. Spear, 1985). Such a pattern, which interestingly mirrors that of the contemporary situation, is suggested by both the oral traditions and linguistic borrowings between different groups who refer to Shungwaya (Allen, J. 1980, 1981b, 1984; Nurse, D. and T. Hinnebusch, 1993: 492-493; Pouwels, R. 1987: 12-15). Hence the Swahili communities lived in towns along the coastal littoral, and were involved in trade and fishing whilst the Mijikenda, Pokomo, and Taita, who claim to have been farmers, appear to have been settled in the immediate fertile uplands and river valleys of the coastal hinterland. Both maintained contacts between each other and the neighbouring Southern Cushitic and Eastern Cushitic speaking Dahalo and Boni (Aweera) hunter-gatherers and Somali (Katwa) and Oromo (Galla) pastoralists.

However, it has also been argued that these client relations and alliances were dominated by a pastoralist elite. Based on traditions which referred to the *Kilio* (sometimes equated with the Segeju in oral traditions) as the ruling Shungwaya group, Allen's (1993: 135-160) conflated view of a *'Great Shungwaya State'*, overseen by an Eastern Cushitic pastoral elite and ruled by a Segeju kingship whose control extended over much of southern Somalia, Kenya and northern Tanzania, is an infamous example of how not to use the somewhat disparate and incomplete evidence (see Shen, J. 1995: 352-353; Spear, T. 1999; Willis, J. 1994). More probable, but still unproven, is the scenario suggested by Pouwels (1987: 13-15), in which traditions relating to rulership were somewhat less formal than an implied suzerainty. Rather, it would seem that relationships varied a great deal depending on immediate circumstance. Hence in the drier, inland areas where pastoralists clearly had the advantage, the Bantu speaking agricultural communities were likely to be in a subordinate position, whereas closer to the coast, where Bantu speaking agriculturalists were presumably numerically stronger, this hegemony was probably reversed.

Spear was not so much concerned with identifying Shungwaya on the ground however, as rather justifying its historical reality to the Mijikenda (Spear, T. 1978: 20). Despite Morton's (1972, 1977) arguments to the contrary, confirmation that the antecedents of the Mijikenda at one time lived to the north, was seen by Spear to be verified through the *Book of the Zanj,* and independently confirmed by evidence for two

'Mijikenda' place names between Merca and Barawa, in Southern Somalia (Merca = Mijikenda ma-rika; Macaia = Mijikenda ma-kaya) (Spear, T. 1978: 23-25). Similarly, Bantu populations which still occupy the Webi-Shebelle and Juba river valleys today whilst partly descended from modern imported slaves, could also have been remnants of the Bantu *Kashur* population (Grottanelli, V. 1975: 61-68; Prins, A. 1960a: 28-31; Spear, T. 1978: 25).

In the *Book of the Zanj*, we are given a list of twelve *Kashur* names. From this list, Spear (1974: 70) identified three main groups of contemporary Bantu speaking peoples. The first four are identified as Digo subgroups, supposedly the first to have migrated from Shungwaya into southern Kenya, whilst five names are seen to correspond to some of the northern Mijikenda. The remaining three are all seen to be subgroups amongst the modern Taita (see table 2.1).

Book of the Zanj	Spear, T. (1974)	
Dighu	Digo	Digo
Shmuba	Shimba	
Lughu	Lungo	
Sifi	Tiwi	
Ghiryama	Giryama	Northern Mijikenda
Shuni	Chonyi	
Kamuba	Kambe	
Ribi	Ribe	
Jibana	Jibana	
Tita	Taita	Taita
Kadhiyaru	Kadiyaru	
Dara	Ndara	

Table 2.1 The twelve *'Kashur'* tribes of Shungwaya

Whilst Spear was aware of the inconsistencies inherent within the Rabai, Duruma and Segeju traditions of Shungwaya, his reliance upon this text seemed to have prevented a similar critical assessment of the variability amongst the remaining named Mijikenda groups. In this way, *'Spear focuses upon reducing the different variants of the myth to a single historical truth'* (Walsh, M. 1992: 12). Morton (1972) had already drawn attention to traditions which suggest Mwangea Hill was a homeland for the Giryama, Kauma, Kambe and Ribe, arguing that Shungwaya was a later appendage, rather like contemporary Christian and Muslim Mijikenda now attach pre-Shungwaya origins from Babel and Mecca (Spear, T. 1974: 68). Similarly, both the Digo and the Rumba clan of the Jibana also have alternative traditions of a northward migration from Tanzania (Willis, J. 1993: 33). Indeed, interviews conducted with Dahalo, Wata and Boni coastal hunter-gatherer communities by Stiles (1980, cited in Walsh, M. 1992: 16-17), suggested that the Mijikenda never came from Shungwaya at all.

Spear also ignored many other coastal hinterland peoples named in later 19th century sources, who are not included in the *Book of the Zanj* and have not been incorporated into our modern perception of Mijikenda unity (Freeman-Grenville, G. 1962b: 216; Emery, 1833: 280-233; Guillain, 1856: 618-620; Harries, L. 1960: 145; Krapf, J. 1860: 159; New, C. 1873: 92; Owen, W. 1833: 418-419; Werner, A. 1915: 326-327)[2]. Although some of these are recognised as clans within modern Mijikenda groups, notably those of the Digo, there is as yet insufficient data to fully appreciate their significance within proto-Mijikenda history (Walsh, M. 13-14; Willis, J. 1993: 32). However, an ongoing study of the extensive, but as yet unused Portuguese documentation suggests that this diversity was also evident as far back as the 17th century AD (Prestholdt, J. *pers. com.* 1998).

The migration from Shungwaya has been dated by Spear (1974, 1978) to the 16th century AD, using the assumed periodicity of Mijikenda age-sets (*rika*) as a chronological guide. By comparing the names of each *rika* Spear reduced the apparent irregularities between different Mijikenda groups into seven corresponding age-sets spanning the period from the Shungwaya migration to the last Giryama age-set dating between c.1870 and 1906 (Spear, T. 1978: 64-65). Assuming an average of 52 years per *rika*, Spear (1978: 65) projected that the first age-set, initiated at Shungwaya and named *'Amwendo'* (the going) by the Giryama, must have been initiated at sometime between c.1558 and 1610.

Whilst the reconstruction of this chronological periodicity, and the reliability of the collated age-set lists were recognised to be of *'only limited utility'* by Spear (1978: 65), and largely dismissed by Walsh (1992: 5-7), the approximate dating was seen to be verified by independent mid 16th century AD Portuguese texts (Spear, T. 1974: 72-73). Portuguese sources refer to the *'Mozungulos'*, who lived in the hinterland of Mombasa, and the *'Mossequejos'* who lived near Malindi. However, they do not say anything about them having arrived recently to the area (Walsh, M. 1992: 8). Indeed, the early Portuguese visitors to the East African coast only directly dealt with the coastal Swahili and therefore had only a limited knowledge of interior communities.

The *Mossequejos*, generally accepted to be the antecedents of the contemporary Bantu speaking Segeju, were first recorded by Fr. Monclaro in 1569 and again in 1589 by Fr. Joao do Santos, when they defended Malindi as allies against the raids of the so-called 'Zimba' (Strandes, J. 1962: 316-317) and against

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[2] These include the Amprengo, Bombo, Daluni, Gonja/Gondscha, Jombo, Kawieni, Lawa, Lungo, Mackoolo, Makshingo, Malife, Mannamokke, Mohane, Monga, M'rima, Mtawe, Mukomame, Muzador, Ndorobo, Shimba, Tiwi, Wamaraka, Wangoombe and Watai.

Mombasa in 1592 (Burton, R. 1872: 19-121; Freeman-Grenville, G. 1962b: 141, 149-150; Gray, J. 1947, 1950: 91). They are described as having no *'cultivated lands'* but *'have large numbers of cattle, and subsist upon their blood and milk'* and would seem to have been a typically pastoralist community (Fr. Monclaro, 1569 cited in Freeman-Grenville, J. 1962b: 141). They are last mentioned in the Malindi area in 1640, but also appear sometime earlier on the southern coast of Kenya at Vanga before 1630 (Allen, J. 1993: 103; Strandes, J. 1961: 304).

The first reference to the *Mozungulos* is not made until 1592 when they are recorded as allies of Mombasa during the same war against Malindi (Spear, T. 1974: 73). Later referred to as the *Wanyika*, their direct association with individual northern proto-Mijikenda groups are affirmed by reference to their *'King of the Chonyi'* who sent provisions to the Portuguese whilst under siege between 1696-1698, and the *'Arabaja, now called Rabai'* who murdered Sultan Hassan bin Ahmed at the bequest of the Portuguese in 1615 (Strandes, J. 1961: 170, 217, 305-306). The *Mozungulos* were renowned for their archery and arrow poison (Rezende, 1634, trans. Gray, J. 1947: 2-28; Freeman-Grenville, G. 1962b: 175-186). It would thus seem highly likely that they are the unnamed *'1500 Kaffir archers'* allied to Mombasa in 1505 (Freeman-Grenville, G. 1962b: 98) and again in 1528 and 1529 (Spear, T. 1978: 33-34; Walsh, M. 1992: 9). Spear (1978: 33-34) argued that these were the Rabai, who settled in the coastal hinterland before the arrival of the other northern proto-Mijikenda. Yet both groups are seen to have held political relations with the coastal towns, who maintained their allegiance through the payment of annual tributes in cloth (Rezende, 1634, trans. Gray, J. 1947), and it would seem that such relations were long established prior to any supposed 16^{th} century AD migration (Walsh, M. 1992: 9-10).

Willis (1993: 37) argued that such alliances were not simply between two distinct sides, but rather consisted of a set of balances and alliances between individual patrons, reinforced through the establishment of kin based ties. The Ribe for example, perceive themselves not simply as allies to the Kilifi Swahili, but the Kilifi are Ribe and the Ribe are or rather can be Kilifi. The same is also true of the Digo and Kilindini Swahili from Mombasa. Competing Digo, Ribe, Jibana and Chonyi traditions of residence in Mombasa claim that they had settled on the island prior to anyone else. Yet if we are to take Spear's (1978) dating of the migration as fact, then as Willis (1993: 35-36) has pointed out, Mombasa would already have had a well-established town (Sassoon, H. 1980), and Fort Jesus would have already been under construction by the Portuguese (Strandes, J. 1961: 301-304). Alternative traditions from Vumba, also have the Digo already settled in the southern coastal hinterland sometime before the election of its first sultan, the dating of which is tentatively placed at c.1204 AD (Hollis, A. 1900: 276-277; cited in Walsh, M. 1992: 16).

The Mijikenda claim that the pastoral Oromo (Galla) expanded southwards is attested by both Oromo and Somali traditions, and by independent 16th century Ethiopian and Portuguese documentary sources (Beckingham, F. and G. Huntingford, 1954; Brantley, C. 1981: 11-17; Cassanelli, L. 1982; Grottanelli, V. 1975; 50-61; Huntingford, G. 1955; Lewis, H. 1966: 27-46; Spear, T. 1978: 24; Turton, E. 1975: 519-537). Moving from southern Ethiopia around 1530, and radiating into northern Ethiopia, east to Somalia and south into Kenya they are first recorded on the Juba River by 1550 (Grottanelli, V. 1975: 65), and between Pate and Malindi in 1624 (Lobo, J. 1735: 7-9). From here they are known to have continued southwards, apparently destroying many Kenya coastal towns throughout the early 17th century AD. The Bajuni north of Lamu were forced to retreat to Faza on Pate Island (Fitzgerald, W. 1898: 381-82; Strandes, J. 1961: 290). Whilst Malindi had escaped the incursions of the *Zimba* with the help of the *Mossequejos* in 1589, it was abandoned apparently due to the Oromo, in the early 17th century AD (Kirkman, 1964; Strandes, J. 1961: 296-297). The abandonment of Gedi has also been attested to the Oromo (Kirkman, J. 1964; 1975: 237-239), and Owen (1833: 402; cited Brantley, C. 1981: 13) reports that they had burned Kilifi and *'butchered its unfortunate inhabitants'* soon after 1618 (Kirkman, J. 1975:240-241; Strandes, J. 1961: 292).

Whilst the Oromo clearly moved southwards, it would seem that their role as *'destructive villains'* is somewhat exaggerated (Willis, J. 1993: 29). The Oromo are believed to have been stopped in their advance just north of Mombasa through a Swahili alliance with the Mijikenda, now protected in their defended Kaya (Emery, J. 1833: 280; cited Spear, T. 1978: 33). Yet if we are to believe the Vumba traditions, they were also active as far south as the Kenya/Tanzania border sometime before 1617 (Hollis, A. 1900: 281; Baker, E. 1949: 26); a statement corroborated by later 19th century references which showed them extending as far south as the Pangani River in north east Tanzania (Hobley, C. 1929: 177; Krapf, J. 1860: 182; Paulitschke, P. 1889).

The motivation and means for this expansion are unclear, and it would seem more likely that they were drawn into local patterns of conflict and alliance (Walsh, M. 1992: 18-19). This is clearly recorded at Pate, in northern Kenya. Allied closely with Pate, the Oromo were unsuccessfully used in 1637 by the *'King of Pate'* to defend against the rival town of Faza, who were allied with the Portuguese. It is not so surprising then that the Oromo had earlier attacked Bajuni on the mainland who were clearly supporters of Faza (Strandes, J. 1961: 185-187, 207). Similarly, in 1696, Pate had sent reinforcements of *'Wagunya* (Bajuni), *Marakatos* (Somali) *and Galla* (Oromo)' in aid of the Arab siege of the Portuguese held Mombasa (Strandes, J. 1961: 218). Such references would thus seem to reinforce the Oromo role in 17th century coastal politics. As much is also implied in Mijikenda variants of the Shungwaya myth, which refer to good relations with the Oromo until the murder of an Oromo neighbour (Spear, T. 1978: 21; Willis, J. 1993: 34-35). After this dispute, relationships with Mijikenda groups seem to have reverted back to their traditional interdependence. Despite the Oromo presence, traditional Mijikenda life is seen to have been surprisingly free of any Oromo threat. Indeed throughout the 18th century AD the Oromo played an important role in the trade of ivory with the northern Swahili towns (Brantley, C. 1981), and by the 19th century AD, the expansion of the Giryama northwards beyond the Sabaki River was achieved through the co-operation of Oromo who were keen to develop these trade interests further (Brantley, C. 1981). *'Far from inhibiting Giriama expansion, then, the presence of the Galla to the north may actually have encouraged it...'* (Spear, T. 1978: 113-118).

Such a relationship would question the standard history, which saw conflict with the Oromo upsetting the Mijikenda's pattern of residence thus forcing them to become increasingly dependant upon the defensive security of the Kaya. Indeed, there is a growing body of data that questions Spear's (1978) restricted and centralised perception of long-term Kaya habitation. Contemporary patterns of Mijikenda residence, that of a dispersed distribution of patrilocal homesteads made up of extended families, provides a radical contrast to the traditional perception of total group habitation within the Kaya (Mutoro, H. 1987: 161-165; Willis, J. 1993: 40-41). Yet it would seem more likely that this is not just a modern pattern, but rather was also the past norm. *'The tribesmen live in small communities of six or seven villages, grouped together for the sake of a supply of water. In each hamlet the elder is practically supreme though almost powerless beyond its stockade...'* (Johnstone, H. 1902: 269) is likely to be true of pre-19th century Mijikenda settlement patterns as well.

Willis (1993) has argued that the Mijikenda patterns of residence in Mombasa contradict Spear's (1978) notion that the Mijikenda had lived in their separate Kaya until a later 19th century dispersion. Indeed traditions of migration from the Kaya were collected sometime earlier than the first recorded traditions of a migration from Shungwaya (Willis, J. 1993: 35) and descriptions of Kaya over the last 150 years or so would make it seem that the majority have always been in a process of *'recent'* depopulation (Willis J. 1993: 38). It has already been stated that the Mijikenda were seen to have resided in nine primary Kaya, the exception being the Digo, who being *'composed of many individual groups'* quickly sub-divided into '*a profusion of smaller sub-Kayas'* (Spear, T. 1978: 30).

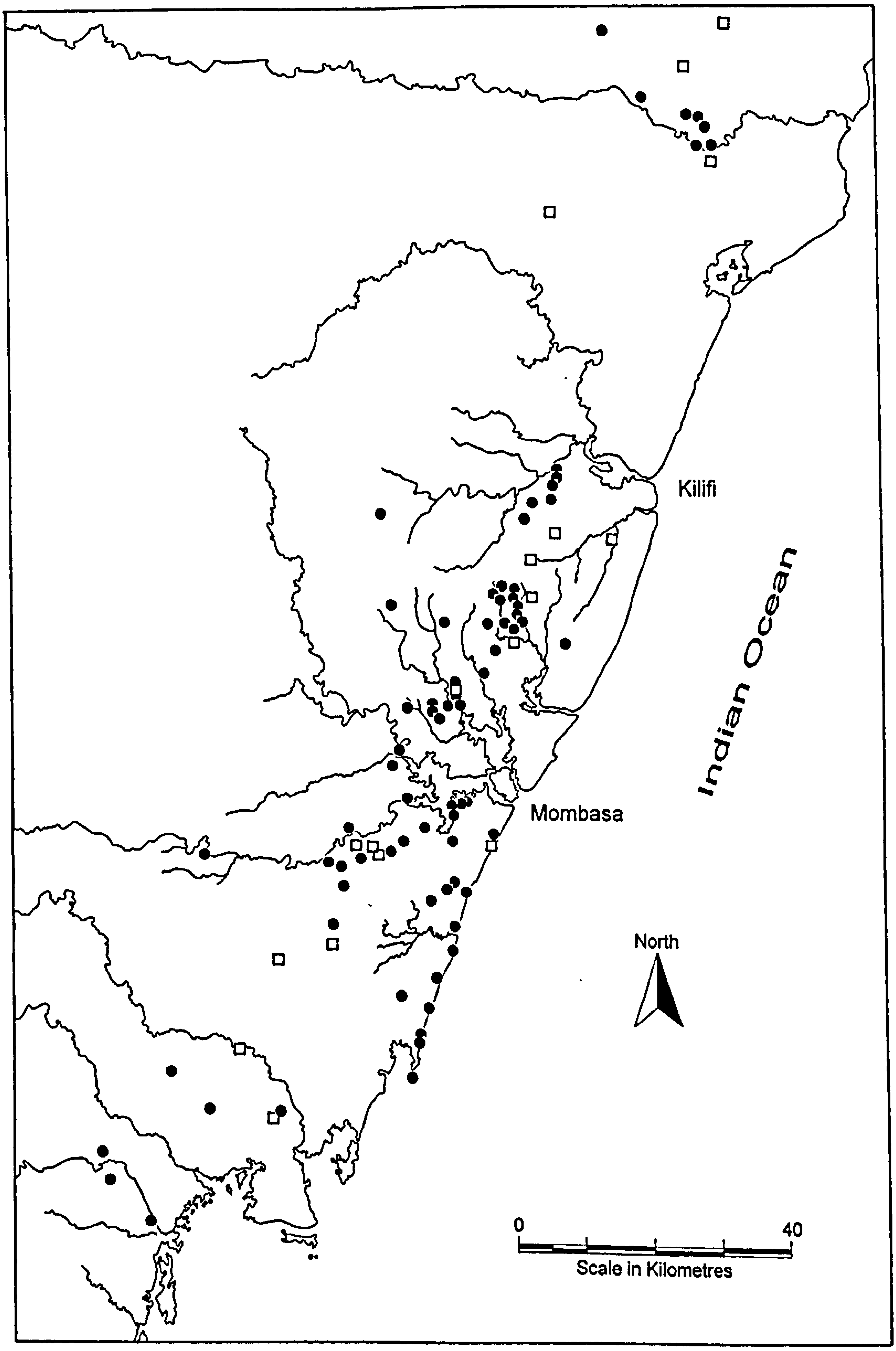

Figure 2.3 Distribution map of Mijikenda Kaya settlements (circles) and Sacred Groves (squares)

Yet in reality all Mijikenda groups have claims to a multiplicity of Kayas. Mutoro's (1987) ethnoarchaeological survey listed 24 Kaya, Robertson's (1987) botanical study of Kaya forests lists 53, and the number of identified Kaya localities can now be expanded to 72 (see Appendix A and figure 2.3). In addition, there are a known total of 18 smaller sacred grove areas. These are seen to provide alternative ritual foci outside of the Kaya (see section 4.7 below).

Spear (1978: 49) recognised that this multiplicity existed prior to the later 19th century AD period of Kaya dissolution, but viewed such Kaya as either being occupied sequentially, so that there was only ever one Kaya occupied by each group at any one time, or as subordinate *'residences'* lacking the same cultural and ritual importance of the primary Kaya. However, this does not really explain the dynamics that underlay the foundation of each of these secondary and sometimes tertiary Kaya. If the Mijikenda were all united together in one Kaya, why would such a multiplicity of Kayas ever have evolved?

The best explanation of Kaya multiplicity questions the standard view of a cohesive Mijikenda society (Willis, J. 1996). Willis argues that the very multiplicity of alternative Kayas would suggest that the authority of the primary Kaya was continuously being challenged and redefined as competing groups sought control over the traditional institutions of power. Such conflicts of leadership often resulted in one group being forced to leave the existing Kaya to establish their own independent settlement. That this was not an uncommon occurrence is attested by the Mijikenda oral traditions (Spear, T. 1978: 31-32, 1982; Wilis, J. 1996). Walsh (1992: 15) refers to this process of subdivision and new Kaya foundation as the *'developmental cycle of Kayas'* in which both their *'fission (and periodic fussion) may have been a Mijikenda norm'*. Hence we should be looking at a Mijikenda history in which the modern pattern of dispersed settlement is not the product of recent social and economic transformation, but rather is the culmination of a much longer and continuous process of settlement change (Willis, J. 1996: 97).

From where then, did the standard notion of 'nine Kayas' derive? Willis (1993, 1996) views the notion of a corporate residence within the politically centralised Kaya as an ideological tool used by elders at a time when their traditional power was beginning to be undermined. Thus in the same way that Shungwaya traditions were instrumental in defining Mijikenda identity, so to were the traditional institutions of the Kaya in defining the elders' political autonomy. Elders will talk about the existence of many Kayas, and refer to past family members who had lived elsewhere. At the same time they will always refer to an idealised past in which a single Kaya was the place of residence and source of identity for each Mijikenda group (Willis,

J. 1996: 95-97). By reinforcing the historical role of the Kaya, elders also reinforce their own claims to traditional power.

Mutoro (1987: 33-34) has argued that the claim to a Shungwaya homeland has no necessary cultural connection with the historical presence of the Kaya (see also Clarke, G. 1996). None of the other Shungwaya peoples are seen to reside in Kaya, and Allen's (1993: 87-89) assertion that the Bajuni, Gallla, Swahili, Pokomo, Segeju, Shambaa and Pare all shared a similar pattern of sacred settlements is largely unfounded. Indeed, the Mijikenda themselves perceive many alternative meanings in their definition of a Kaya: from the individual site locality (as a place of residence, as a secure refuge during times of war, or as a place of burial and ritual power) to a broader regional based perception of shared ethnic and cultural identity (see for example Int Kil12a in Willis, J. 1996: 97). The variability inherent within Kayas has led Willis (1996: 96) to suggest that Kayas might not share a common origin. Instead, they perhaps evolved as diverse settlement areas and sacred centres, which during a process of cultural and ethnic standardisation, have been reinterpreted as Kayas at some point in time. Perhaps the apparent problem of what constitutes a Kaya is thus generated by the rigidity of our own contemporary definition.

2.5 Comparative linguistics: North East Coast Bantu and Sabaki

By far the most cited independent evidence for Shungwaya has come from historical linguistics. Yet this evidence has also proved to be contradictory. Firstly, Spear (1976; 1978) sought to substantiate claims for a common homeland through the closely related co-ordinate languages of those Bantu agricultural groups who shared Shungwaya traditions (Nurse, D. and G. Phillipson, 1975). Hence, those groups who came from Shungwaya would also have had a shared proto-language (Spear, T. 1974: 57). Yet later refinement of the linguistic classification demonstrated that a number of groups were in fact associated with proto-languages differing chronologically in their development and therefore, not all coordinate as Spear had originally claimed (Hinnebusch, T. 1976a, 1976b, 1981).

The Pokomo, Mijikenda and Swahili were all seen to be part of the Sabaki branch of the North East Coast Bantu language family. However, the Segeju, although now speaking Digo, originally spoke a Daiso language (Nurse, D. 1982a). They are thus seen to be linguistically unrelated to the Sabaki, Daiso being part of the separate Thagicu Bantu linguistic group of the central highlands of Kenya (see figure 2.4). Similarly, the Taita, were seen to speak two languages, Saghala, which is only distantly related to the Sabaki group, and Dawida (Dabida) which, as part of the Chaga/Taita Bantu group, is again linguistically unrelated to Sabaki (Nurse, D. 1979, 1981). Whilst the Sabaki peoples are seen to have been in later contact with both of these language groups (Nurse, D. and T. Hinnebusch, 1993: 534-536), unless there has been a radical language change, it seems unlikely that either group was present together for any long period at Shungwaya (Spear, T. 1982: 14-16).

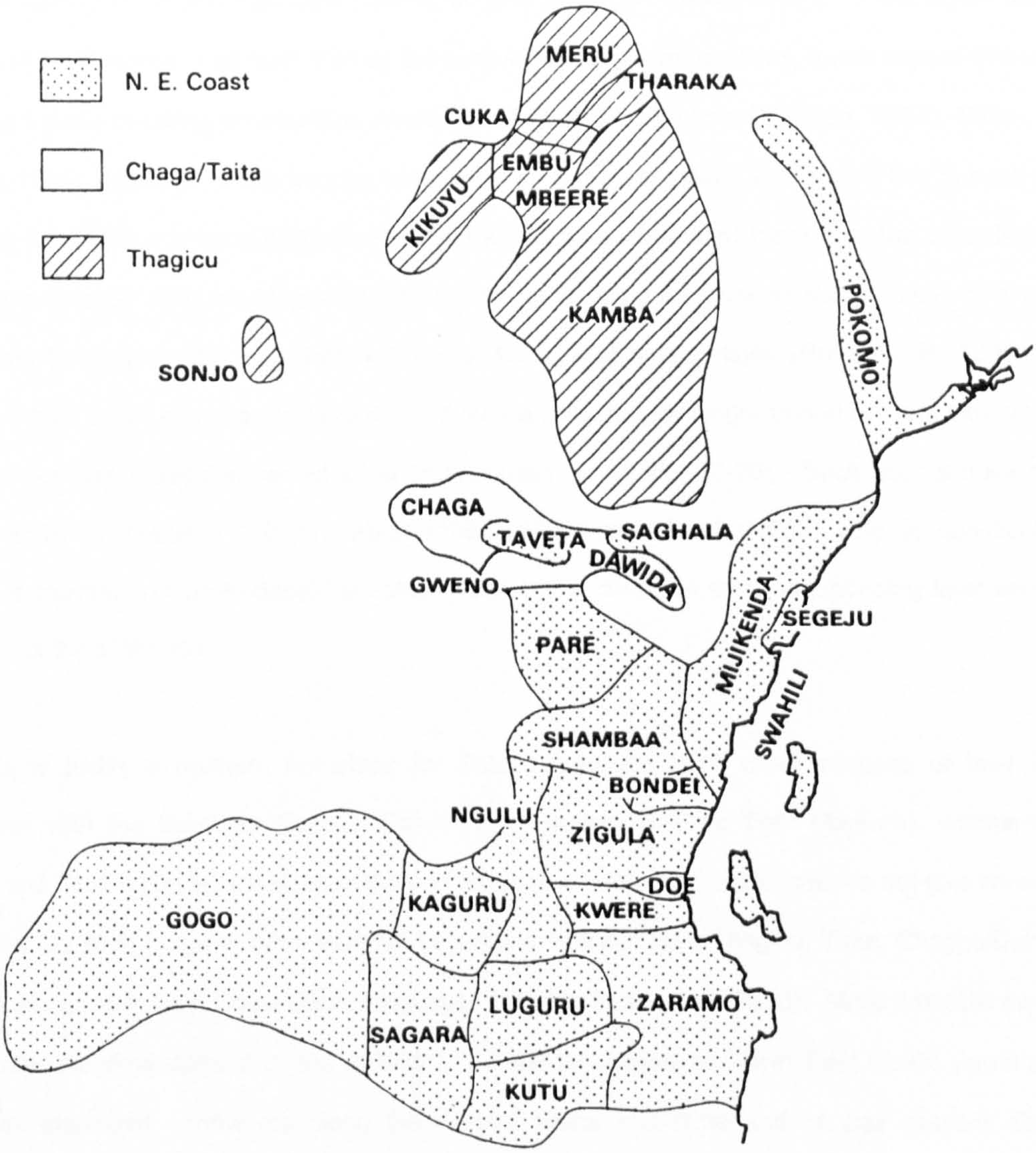

Figure 2.4 Map showing the location of Bantu languages in eastern Kenya and north-eastern Tanzania (from Spear, T. 1981b: 36)

Secondly, the location of Shungwaya in Southern Somalia is a considerable distance north of the assumed area of North East Coast Bantu language development. The North East Coast Bantu languages are today seen to be concentrated in the highlands of north east Tanzania and south east Kenya, between Pare, Kilimanjaro, Taita, Usamabara and the coast, extending south into the Rufiji Delta. Thus, using the 'principle of least moves' it would seem that this area was the first locality settled by the North East Coast Bantu speaking population (Hinnebusch, T. 1976a; 1981; Nurse D. and T. Hinnebusch, 1993).

However, evidence for the northern geographical location of proto-Sabaki communities is much more tenuous. Linguistically the northern coast of Kenya and southern Somalia is today the area with the greatest diversity of Sabaki speakers (Nurse, D. and Spear, T. 1985: 46-47). Thus, again using the 'principle of least moves', and motivated by the northern Shungwaya traditions, it was argued that this was where the Sabaki speaking communities would have first evolved (Nurse, D. 1983a, 1983b; Nurse, D. and T. Spear, 1985). However, if this was the case, then the Sabaki speakers would have had to have made a rapid and *en masse* migration northwards, which would have separated them from the other North East Coast Bantu groups. This would appear very unlikely considering the close similarity now evident between the Sabaki languages and the other North East Coast Bantu languages (Pouwels, R. 1999: 288), a similarity which would have had to have evolved over a considerably longer period of close interaction than the rapid northern movement would allow (Hinnebusch, T. 1976b: 22-26). Such doubts have all been expressed by Hinnebusch (1976b), Ehret (1984, 1988) and Walsh (1992) who in questioning this northward migration of proto-Sabaki speakers, also throw doubt on the corresponding later southwards migration of the Mijikenda.

Attempts to justify a northern homeland for Sabaki speakers have cited evidence of their linguistic interaction with the Southern Cushitic Dahalo and Eastern Cushitic Boni (Aweera), southern Somali (Garre) and Oromo (Galla) speakers of the northern coast. However, such views do not give consideration to the equally wide range of other external linguistic influences from Thagicu, Taita, Chagga/Dabida, and the remaining North East Coast Bantu languages (cited in Spear, T. 1999: 6). More probable then, would have been the development of the individual Sabaki languages as North East Coast Bantu speakers gradually expanded northwards along the coastal littoral and hinterland of their present distribution, differentiating as they settled in their respective geographic areas and interacted with speakers of different languages. Ironically, these arguments seem to be largely ignored in the most recent comparative study of the Sabaki languages (Nurse, D. and T. Hinnebusch, 1993; see Pouwels, R. 1999 for a critical review).

Let us look at the development of the North East Coast Bantu and especially the Sabaki languages more closely. The North East Coast Bantu languages are believed to have split into several divergent language clusters (see Hinnebusch, T. 1976a, 1976b; Nurse, D. 1982b; Nurse, D. and G. Phillipson, 1975, Nurse, D. and T. Hinnebusch, 1993; Nurse, D. and T. Spear, 1985).

These include:

- Sabaki (Mijikenda, Pokomo, Comorian, Swahili, Elwana and Mwani)
- Pare (Pare, Taveta, Saghala)
- Seuta (Bondei, Shambala, Ngulu and Zigula)
- Ruvu (Gogo, Kaguru, Sagara, Kami, Kutu, Doe, Nhwele, Luguru, Vidunda and Zaramo)

Assuming a linear, genetic evolution, it was shown that proto-Pare was the first subgroup to separate from the proto-North East Coast Bantu language group, perhaps differentiating as they moved towards the Taita Hills. This was followed by the proto-Ruvu speakers to the south, and later, by the proto-Sabaki to the north, leaving the proto-Seuta to evolve between (Hinnebusch, T. 1967a, 1967b; Spear, T. 1981b: 37). Each shift was seen to imply a parallel historical process as the languages diverged through the movement of populations away from their proto-group (see figure 2.5).

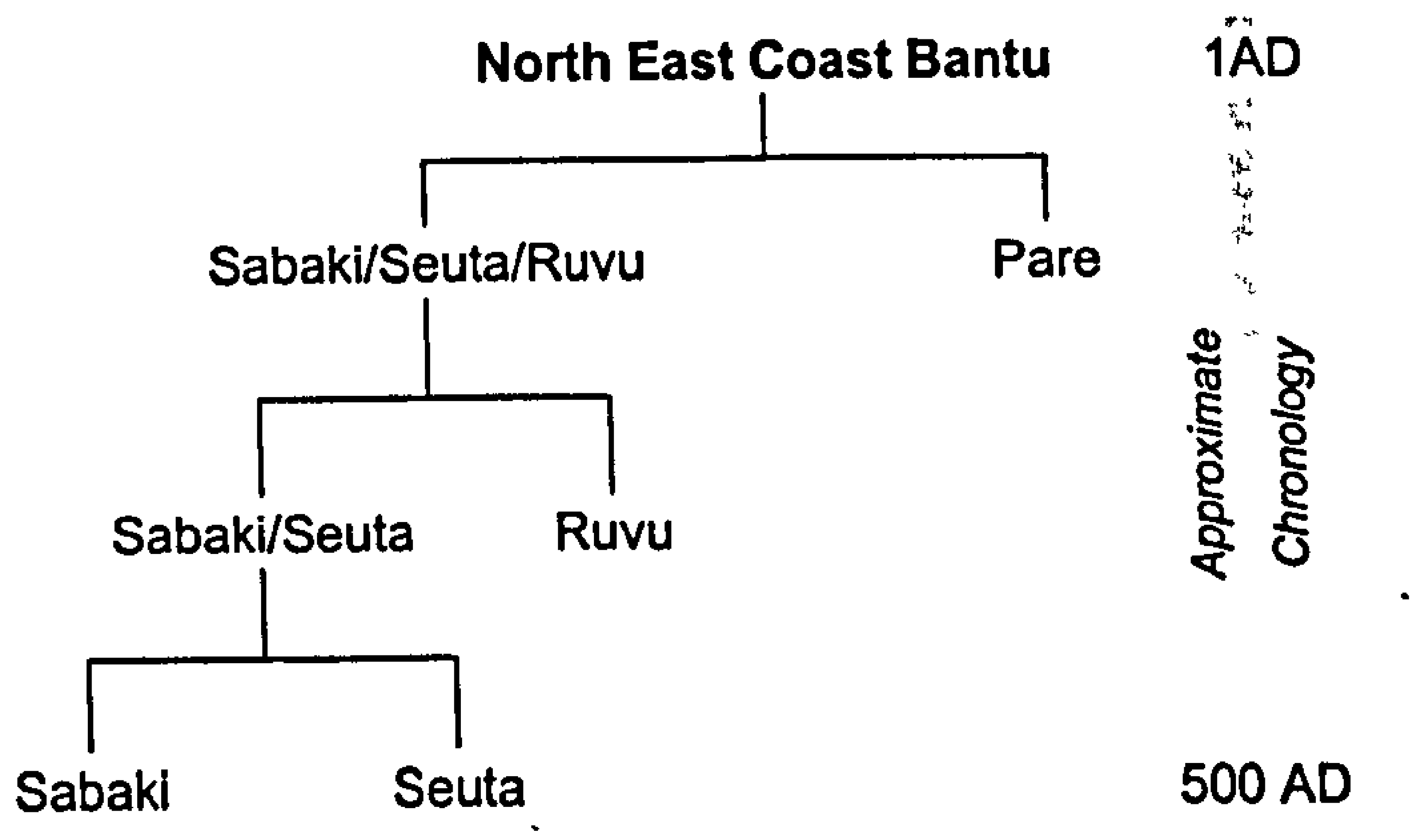

Figure 2.5 'Historical' classification of the North East Coast Bantu language group

The small linguistic difference between Sabaki and other proto-North East Coast Bantu language would suggest that this separation took place over a relatively short time span. In the most comprehensive and up to date study of Sabaki languages, Nurse and Hinnebusch (1993: 23) suggest a tentative date of c.1 AD for the initial emergence of the proto-North East Coast Bantu group, with the final split between Sabaki and Seuta, taking place sometime around 500 AD.

Whilst it is recognised that there is no direct evidence to equate linguistic populations with archaeological cultures, both the linguists, historians and archaeologists all generally assume that the proto-North East

Coast Bantu speakers are directly equated with the early iron-working, farming communities, recognisable from the late first millennium BC (for an alternative view which links early iron-working, farming communities with Upland Bantu speakers, see Ehret, C. 1998). Similarly, the break up of North East Coast Bantu would correlate well with the rapid change between the Kwale Ware and TT/TIW ceramic variants, between the 4th and 6th centuries AD (see Chapter 3).

As seen in figure 2.6 below, Sabaki then seems to have quickly differentiated into two main subgroups, with Mijikenda, Comorian and Lower Pokomo forming a seemingly unified 'core group' of linguistic 'innovators', surrounded by a peripheral and less unified 'conservative group' of Swahili, Elwana and Mwani speaking communities (Nurse, D. and T. Hinnebusch, 1993: 493).

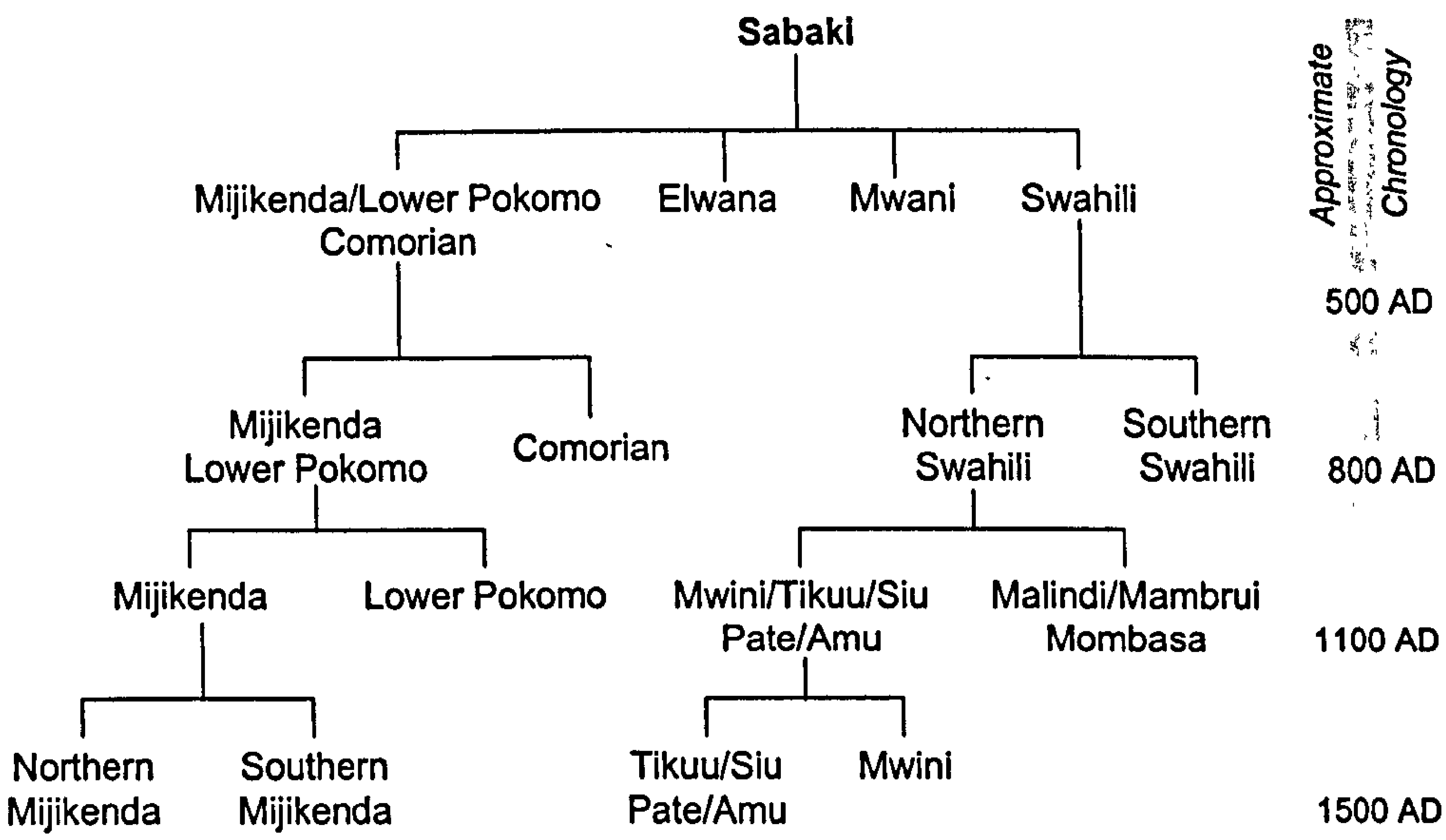

Figure 2.6 'Historical' classification of the Sabaki language group

Little is known of Elwana, but it would seem to have continued in isolation from the other Sabaki languages, presumably in northern Kenya/southern Somalia where at some time it assimilated communities of Southern Cushitic speaking Dahalo (Nurse, D. 1983b; Nurse D. and Hinnebusch, 1993: 496-501). Mwani is most closely related to Southern Swahili dialects, but has been also classified as a separate member of Sabaki in its own right. It would seem to have split from the main group of Sabaki speakers sometime before any expansion northwards, interacting with other, southern Bantu groups (Nurse, D. and T. Hinnebusch, 1993: 524-528). By approximately 800 AD (a date primarily based on the archaeological excavation of coastal Swahili settlements) Swahili was beginning to divide into northern and southern dialects (Nurse, D. and T. Hinnebusch, 1993: 493).

At about the same time, the 'core group' was also seen to be slowly differentiating. Archaeologically the Comorian speakers are seen to have reached the Comoro Islands at least by the 9th century AD (Wright, H. 1984; 1993), linguistically splitting from Mijikenda and Lower Pokomo some time before. It is not known where the Comorian language developed, but it is clear that there was continuing contact with both northern and southern Swahili dialects, a feature that is used to justify their gradual north to south movement (Nurse D. and T. Hinnebusch, 1993: 496-497).

From about the 12th century AD onwards, both northern and southern Swahili dialects further differentiated as individual communities slowly innovated and diverged from their neighbours. Northern Swahili first split into two groups: Malindi/Mambrui and the dialects of Mombasa (Mvita, Ngare, Jomvu, Changamwe and Kilindini) to the south, and Mwiini, Tikuu (Bajuni), and Siu/Pate/Amu to the north, with a later subdivision between Mwini and the remaining Tikuu and Siu/Pate/Amu dialects some time after (Nurse, D. and T. Hinnebusch, 1993: 504-511). In contrast, Southern Swahili dialects, including Vumba, Mtang'ata, Pemba, Tumbatu, Makunduchi, Unguja, Mafia, Kilwa, and Mgao all appear to have been more isolated from each other, with no strongly defined dialect clusters evident (Nurse, D. and T. Hinnebusch, 1993: 511-512).

It is unclear when Mijikenda and Lower Pokomo also became fully separated. It has been argued that this stage would seem to have been not so far in the distant past, as neither Mijikenda nor Lower Pokomo has undergone any major linguistic innovation since (Nurse, D. and T. Hinnebusch, 1993: 542). However, Ehret has argued that the linguistic evidence for the Mijikenda would point to their separation at least some 500 years before the commonly accepted late 16th century AD date (cited Pouwels, R. 1987: 11; Ehret, C. 1998: 186). Whilst Lower Pokomo is seen to remain relatively homogenous, Mijikenda can be further sub-divided into both northern and southern dialects. Although it is clear that Giryama, Kauma, Chonyi, Jibana, Kambe, and Ribe form the core northern group, and Digo the core southern group, both Rabai and Duruma seem to be interchangeable between the two, depending on lexical and phonological differences (Heine, B. and W. Mohlig, 1980; Nurse, D. and T. Hinnebusch, 1993: 537-539). Spear (1978: 27-29) asserted that this difference reflected the earlier migration date of the Digo from Shungwaya, and the doubtful legitimacy of Rabai and Duruma Shungwaya traditions. However, Digo is also seen to differ culturally from the northern Mijikenda. Not only are their Kaya institutions, residence patterns and *rika* age-sets different from the northern Mijikenda, but also the Digo were traditionally a matrilineal society in contrast to the patrilineal north. As for the Rabai and Duruma, both practise double unilineal descent, but with patriclans being more significant to the Rabai, and matriclans more significant to the Duruma (Spear, T. 1978: 55-56). This would provide some strong arguments that the Digo similarly never came from Shungwaya.

2.6 Conclusion: rethinking Mijikenda migration and settlement

The foregoing discussion has illustrated the inherent confusion in the available sources for Mijikenda migration and settlement history and those related traditions for a Shungwaya origin. Doubt has been cast upon the historicity of contemporary Mijikenda identity and therefore, of those related traditions surrounding the myth of Shungwaya. The coherence of Spear's model can no longer be seen to stand up to a critical examination. Hence it can no longer be accepted as the 'standard' history. However, there is still insufficient historical data to unanimously support any single strong alternative. Rather, in addition to Spear's (1978) standard history, we are left with two conflicting, yet equally plausible scenarios.

Scenario one: Spear's (1978) model of an *en masse* migration of the Mijikenda from Shungwaya in the 16th century AD is no longer acceptable as the standard history. However, it is still possible to argue that at least some of the antecedents of the northern Mijikenda did migrate southwards, bringing with them the cultural traditions and institutions from 'Shungwaya' into the central and southern coastal hinterland of Kenya. These groups would have encountered and assimilated with those other Sabaki/North East Coast Bantu speaking groups, including the proto-Rabai and proto-Digo, who are perhaps best seen as remnant populations left *in situ* from the gradual northwards expansion during the early first millennium AD. Thus whilst not completely refuting the notion of Shungwaya, it recognises firstly that the coastal hinterland of central and southern Kenya was not entirely unoccupied. Secondly it suggests that the movement from Shungwaya, whilst credibly generated by the break down of relationships with the pastoral Oromo, was not likely to have been one of mass population migration, neither was it necessarily a single, historic event. Instead, the existing population and settlement were perhaps disrupted as those northern Mijikenda groups, in retracing their steps southwards, coalesced around the defensive and ritual foci of the Kaya.

Scenario two: this scenario would argue that the Mijikenda have never lived in a northern Shungwaya. Hence the proto-Mijikenda settled in the central and southern coastal hinterland of Kenya as other Sabaki speaking populations, including the Lower Pokomo, Elwana, and northern Swahili continued to move northwards. As they settled, the proto-Mijikenda interacted with possibly agro-pastoral Southern Cushitic speaking populations, gradually assimilating them and adopting elements of their culture, most explicitly the incorporation of the term *moro* (Dahalo = 'cattle fold, enclosed area') into the Kaya. Those Southern Cushites who retained their own separate identity, notably the Dahalo, seem to have done so by occupying marginal areas where they practised a hunter-gatherer economy, later adopting an Eastern Cushitic language as they maintained client relationships with the southwards expanding Oromo. It was this expansion which increasingly placed tension on their interaction with the emerging Mijikenda peoples. Whenever conflict arose, the Mijikenda withdrew to the protection of their Kaya until relationships could be resumed.

Hence we have two scenarios, the first of which emphasises a modified version of Spear's initial model, in which at least part of the cultural and historical identity of the contemporary Mijikenda did in fact originate from a northern Shungwaya homeland as their oral traditions claim, and the second, in which Mijikenda cultural and historical identity has evolved in situ, but with the incorporation of sedentarised, and now Bantu speaking ex-pastoralists. Both scenarios continue to reflect the essential relationship between Bantu speaking agricultural communities and their Southern and Eastern Cushitic pastoral and hunter-gatherer neighbours. Similarly, both scenarios suggest that there should be considerable archaeological evidence for the continuous occupation of the coastal hinterland of Kenya from at least the mid first millennium AD. It is a discussion of such evidence, or its seeming absence, which Chapter 3 will now begin to explore.

Chapter 3 Archaeology in Coastal East Africa: a review of existing knowledge

3.1 Introduction

Attention has already been drawn to the internal dissonance inherent within existing interpretations of coastal historiography. This chapter will now review parallel conflicts in our existing interpretations of the available archaeological evidence. In particular, the discussion expands upon those themes raised in Chapter 1. Primarily focusing on the coast and immediate interior of Kenya and Tanzania, it also encapsulates evidence recovered from Somalia, Mozambique and the Comoro Islands.

East African coastal history has been commonly presented within a homogenous and bounded framework. Archaeologists have used ceramic typologies and ethno-linguistic correlates to define fixed cultural entities. Often restricted to specific geographical foci, these oversimplified constructs have been used to extrapolate broad cross-regional statements about socio-economic organisation and development. This discussion will illustrate how these statements have formed the basis for controversial and sometimes circular debates surrounding East African coastal development and particularly the issue of early Swahili identity and cultural origins.

3.2 Changing terminology

The urban, 'Swahili' archaeology of the coastal littoral has often been considered separate to the agricultural, 'Iron Age' archaeology of the interior. However, since the inception of the *'Urban Origins in Eastern Africa'* project in the late 1980's (Sinclair, P. and S. Wandibba, 1988), a greater awareness of their shared socio-economic and cultural symbiosis has meant that neither can now be considered in isolation from the other. For this reason, it has become necessary to redefine the existing terminology to encompass shared regional trends. In this thesis the previous definition of a distinctive and separate 'Iron Age' culture is no longer seen to be valid. The shared package of cultural traits that constitute the parameters for the designation of the 'Iron Age' clearly restricts how such communities are perceived by archaeologists (see Sutton, J. 1994/5). This allows little room for the recognition of localised variability, but instead portrays a static image of homogenous and neatly bounded groups, tied to particular ethnic identities.

In the same way, the inherent techno-evolutionary periodisation of the 'Iron Age' is now viewed with caution (Phillipson, D. 1993; Sinclair, P. et. al. 1993; Vansina, J. 1995b). It is increasingly clear that iron technology was not just a preserve of Bantu-speaking agriculturalists (Ehret, C. 1998; Schmidt, P. 1997b; Schoenbrun, D. 1994; Vansina, J. 1994/5). Recently archaeologists in Tanzania have used the term 'iron-working' to replace that of 'Iron Age' (Chami, F. 1994: 13). However, it is believed that such a distinction does not give adequate differentiation from later pastoral communities who, with their use of iron technology, might also be defined as 'iron-working' (Ambrose, S. 1982, 1984; Kiriama, H. 1993; Sutton, J. 1993). In response, the term iron-working, farming communities is used here to distinguish between the so-called 'Pastoral Neolithic' or stone-working, agro-pastoral communities and the emergence of so-called 'Pastoral Iron Age' or iron-working, agro-pastoral communities. Whilst it has been recognised that differentiation between pastoral and farming communities is not always clear cut (Collett, D. and P. Robertshaw 1983b; Maggs, T. and Whitelaw, G. 1991, Maggs, T. 1994/5), such a distinction, when critically defined, can be broadly accepted here (Maggs, T. 1992; Pwiti, G. 1996; Sutton, J. 1994/5).

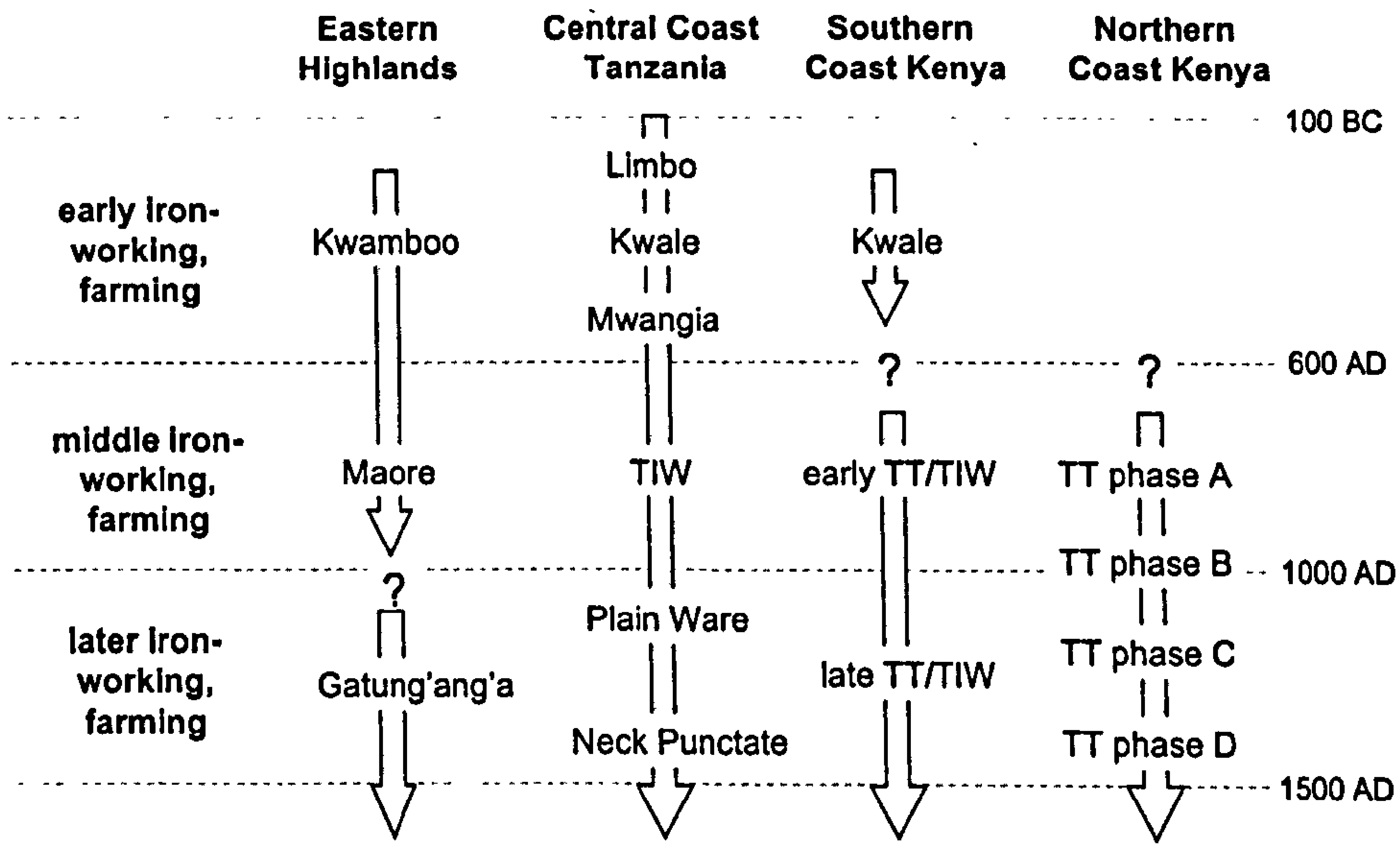

Figure 3.1 Outline of existing cultural periodisation with main regional ceramic variants (note that continuous arrow refers to typological continuity between ceramic groups, a question mark indicates that this continuity is uncertain).

The temporal distinction between an 'early Iron Age' and 'later Iron Age' is also questioned. Although there are recognisable temporal differences in regional material cultures (Vansina, J. 1994/5: 25-26), it is argued that this has been traditionally used to imply a degree of cultural discontinuity and later population migration (see Pwiti, G. 1996: 18; Segobye, A. 1994: 18-20). Hence the previous terminology separated the 'Early Iron Age' and 'Later Iron Age' into two separate cultural traditions (Huffman, T. 1989a, 1989b;

Huffman, T. and R. Herbert, 1994/5). In response, it is argued that such a distinction is misleading. Whilst diffusion and/or migration as an explanation should not be dismissed without good cause, observed patterns of change are also likely to be part of an autochthonous response to both internal and external socio-economic and political factors (also see Collett, D. 1985; Garlake, P. 1983; Gramly, R. 1978; Hall, M. 1987b; Lwana-Lunyiigo, S. 1976; Robertson, J. 1981; Vansina, J. 1994/5).

In the following discussion, a distinction between early, middle and later iron-working, farming communities is followed. However, rather than representing the emergence of distinctive cultural traditions, this periodisation instead represents the different temporal phases within an on-going process of long-term regional development. In this sense, within each period differentiation is also made between distinct, but interrelated and contemporary peoples as reflected in the different regional pottery variants (see figure 3.1).

3.3 Initial settlement: the early iron-working, farming communities

Associated with the spread of the Bantu languages, there is general agreement that early iron-working, farming communities, entered East Africa via the eastern Great Lakes region sometime during the first millennium BC (Collett, D. 1985; Ehret, C. 1998; Kiriama, H. 1993; Phillipson, D. 1993; Soper, R. 1971a). These communities are seen to have reached the central East African coast by the early first millennium AD (Chami, F. 1994; Fawcett, W. and A. La Violette, 1990), expanding both northwards into southern Kenya by the 3rd century AD (Soper, R. 1967a), and southwards, through Tanzania (Soper, R. 1967b; Thorp, C. 1992), Malawi (Juwayeyi, Y. 1993; Robinson, K. 1973), Mozambique (Cruz e Silva, T. 1977, Morais, J. 1988) and South Africa by at least the 5th century AD (Klapwijk, M. 1974; Hall, M. 1987a). Whilst it is beyond the scope of this thesis to explore the complex series of arguments surrounding this movement, it should be noted that the traditional model of a single continuous and large-scale population migration is no longer acceptable. Instead, it would seem that this spread was associated with a multiplicity of successive smaller-scale dispersals, each taking place at different times and for a variety of different reasons (Collett, D. 1982; Ehret, C. 1998; Nurse, D. 1997; Vansina, J. 1995a, 1995b).

Rather than occupying previously uninhabited regions it is also clear that these early iron-working, farming communities encountered an already long occupied landscape (Ehret, C. 1998; Schoenbrun, D. 1993). There is good evidence to suggest that the coastal regions of East Africa have been occupied intermittently since at least the mid Pleistocene. Evidence of Acheulean and Levallois lithic industries have been excavated from Sassoon Hill, Mtongwe and Omar Hill on the southern coast of Kenya (Omi, G. 1982, 1984, 1986, 1988, 1991). There is now a growing body of sites which suggest that such populations increased markedly between the middle and later so-called 'Stone Age' periods (Kato, Y. 1991: 114).

Unfortunately, remarkably little is known of the hunter-gatherer populations of the Holocene. Survey work on later stone-working, hunter-gathering sites have been reported along the Juba River of Southern Somalia (Coltorti, M. and M. Mussi, 1984), and in the coastal hinterland regions of Mozambique (Adomowicz, L. 1990; Morais, J. 1988). Here a series of radiocarbon dates associated with microliths range from the 6th millennium BC to the 6th century AD (Sinclair, P. 1991). However, there has been no formal comparative assessment of such sites in Kenya and Tanzania. Later stone-working sites are reported in several localities along the coast of Kenya, including Sinseme, Mzungu Wa Iwe, Cha Simba Konjora Hill and Mutesa (Chami, F. 1998; Soper, R. 1966a). A similar number are now known in the coastal hinterland of Tanzania, including Kiwangwa, near Bagamoyo (Chami, F. 1996), Ziweziwe, Kirungwi, Ngevu and Mkungu between Dar es Salaam and Kisiju (Chami, F. and E. Kessy, 1995; Kessy, E. 1997), and Kibiti, south of Kisiju (Chami, F. 1998). In contrast, systematic survey undertaken in the Tanga region of northern coastal Tanzania, failed to identify any evidence of stone-working habitation (Marean, C. and J. Shea, 1996).

Such sites have been attributed to a coastal 'Wilton' culture (Chittick, N. 1975; Clark, J. 1954; Harding, J. 1961; Isaac, G. 1974; Masao, F. 1979; Posnansky, M. 1973), commonly associated with Khoisan speaking populations (Ambrose, S. 1982: 139; Ehret, C. 1980; for doubts about the existence of Khoisan speakers in East Africa see Schepartz, L. 1987). However, these groups are believed to have been marginalised by later Southern Cushitic speaking, stone-working agro-pastoralists (Ehret, C. 1980; 1998: 172-178). There is now some tentative evidence to suggest that such populations also produced pottery (Chami, F. 1996). Indeed, 'Kansyore-like' pottery similar to the Oltome tradition situated in the Lake Victoria region (Collett, D. and P. Robertshaw, 1980; Robertshaw, P. and D. Collett, 1983; Robertshaw, P. 1991; Soper, R. and B. Golden, 1969) is reported from the Chabula rock-shelter in the Nguru Hills of north-east Tanzania (Thorp, C. 1992). The occurrence of these microlithic industries on sites associated with Kwale Ware and later TT/TIW pottery suggests that such groups continued to inhabit these same areas following the arrival of the early iron-working, farming communities (Chami, F. 1994; Fawcett, W. and A. La Violette, 1990; Schmidt, P. and N. Karoma, 1987; Sinclair, P. *et. al.* 1993: 416).

The first early iron-working, farming settlement to be excavated on the coast was that located at Kwale in southern Kenya (Soper, R. 1967a), and this now forms the type-site from which Kwale Ware pottery was first defined (Soper, R. 1971b). Associated with the so-called 'Eastern Stream' of Eastern Bantu speaking peoples, Kwale Ware forms the coastal regional ceramic variant of the Early Iron Age 'Chifumbaze complex' (Phillipson, D. 1993) or 'Mwitu tradition' (Collett, D. 1985; Kiriama, H. 1993). Typologically, Kwale Ware is believed to have evolved from the earlier Urewe Ware pottery of the Interlacustrine regions (Collett, D. 1985; Huffman, T. 1970; Phillipson, D. 1977; Soper, R. 1971c). In this respect, Kwale Ware perhaps shares a parallel development with Lelesu Ware pottery of north-central Tanzania (Kohl-Larsen, L. 1943; Mapunda, B. 1995; Smolla, G. 1956; Sutton, J. 1968; Soper, R. 1982).

Moving southwards, sites with ceramics attributable to Kwale Ware have been identified in the adjacent highlands of north-east Tanzania (Schmidt, P. and N. Karoma, 1987; Soper, R. 1967b; Odner, K. 1971a, 1971b). This distribution is seen to extend through the central coastal region and off-shore islands of Tanzania (Chami, F. 1992a; Chami, F. and P. Msemwa, 1997a, 1997b; Chami, F. and B. Mapunda, 1998; Fawcett, W. and La Violette, 1990; Kessy, E. 1997; La Violette, A. *et al.* 1989; Schmidt, P. *et al.* 1992), and as far south as the Nguru Hills in southern Tanzania (Soper, R. 1974; Thorp, C. 1992). In contrast, north of Kwale, there has been a notable dearth of early iron-working, farming evidence. The occurrences of possible Kwale Ware sherds in the upper excavated horizons of Sinseme rock-shelter (Soper, R. 1966a, 1975; and personal observations), and reputedly as far north as Brava, on the southern coast of Somalia (Chittick, N. 1969b; Soper, R. 1982), have not yet been adequately confirmed (Collett, D. 1985; Jama, A. 1996 Sinclair, P. 1991). However, as will be seen, sites with Kwale Ware pottery do in fact extend at least as far north as Mwangea Hill, just south of the River Sabaki (see Chapter 5). Moving inland, Kwale Ware is widely found on the Taita Hills (Collett, D. 1985; Kiriama, H. 1990), and extends into the Central Highlands of Kenya, at Kilungu and Ithanga Hills (DiBlasi, M. 1979, 1980; Mahlstedt, T. and M. DiBlasi, 1978; Soper, R. 1979) and the upper Tana Valley, east of Mount Kenya (Cummings, H. 1978; Kiriama, H. et. al. 1996). However, with so few sites so far identified there still remain considerable gaps in this pattern of distribution.

Soper's (1967a) excavation of the Kwale type-site established a 3rd century AD date (N-291 cal. AD 270 ± 115; N-292 cal. AD 260 ± 115), for the inception of this iron-working, farming settlement on the East African coast. This compared favourably with dates from earlier Urewe Ware sites, which exhibited a chronological range of between the 6th century BC and 7th century AD (Clist, B. 1987; Soper, R. 1971b; Van Grunderbeek, M-C. 1992; Van Noten, F. 1979), hence confirming the notion of a west to east movement of Bantu speaking peoples. However, until the late 1980s the Kwale type-site has remained our only excavated coastal early iron-working, farming settlement (Chami, F. 1994). Dependency on this date thus led to a misplaced assumption that there was no early iron-working, farming settlement along the coast before the 3rd century AD. New radiocarbon dates recovered from early iron-working, farming sites, notably at the site of Nkese in the Usambara mountains (Schmidt, P. 1988), and Limbo situated south-west of Dar es Salaam (Chami, F. 1988, 1992b; Fawcett, W. and A. La Violette, 1990), have now projected this chronology firmly into the 1st century AD, and perhaps as far back as the last few centuries BC (Chami, F. and P. Msemwa, 1997a: 674).

Within these broad spatial and temporal limits, it is less certain that the definition of Kwale Ware as a homogenous ceramic group can be accurately maintained (Kiriama, H. 1993). Firstly, spatially the observed stylistic differences between Kwale Ware identified in north-east Tanzania and southern Kenya, and Kwale Ware identified from the Eastern Highlands of Kenya have led DiBlasi (1980) to argue that the Eastern Highland assemblages represent a separate regional variant, which he terms Kwamboo Ware. The definition of such a group would correlate spatially with the linguistic evidence, which associates Kwale Ware with North East Coast Bantu speaking peoples. Hence Kwamboo Ware would similarly correlate well with the Chaga/Taita and Thagicu Upland Bantu speakers. This contrasts with Ehret's (1998: 184-193) argument that the makers of Kwale Ware were early Upland Bantu speakers, and the makers of the later TT/TIW pottery tradition were North East Coast Bantu speakers who later supplanted them.

More recently, Chami (1998: 208-209), also using stylistic variability, but this time measured over time, has argued that the early iron-working, farming assemblages identified in the coastal region of Tanzania should be sub-divided into three developmental phases, which he terms 'Limbo', 'Kwale' and 'Mwangia' respectively. The Limbo phase, named after the earliest early iron-working, farming site so far identified in the coastal regions is dated by Chami (1998) to between the last centuries BC to about the 3rd century AD. Hence this phase is seen to be coterminous with the possibly 'agricultural' inhabitants referred to in the 1st century AD Graeco-Roman source, the *Periplus of the Erythrean Sea* (Casson,L. 1989). The second phase, that which was first recognised by Soper (1967a) at the Kwale type-site is dated to between the 3rd and 5th centuries AD. The final phase, that which Chami refers to as Mwangia, dates between the 5th and 6th centuries AD. This phase has proved to be the most controversial as it is seen to be transitional between the early iron-working, farming Kwale Ware period and the later Tana Tradition or Triangular Incised Ware pottery of the middle iron-working, farming period.

3.4 Cultural change: the middle iron-working, farming communities

In the Eastern Highlands of Kenya and north-east Tanzania, there would appear to be a degree of population continuity between the early and middle iron-working, farming periods (Ehret, C. 1998; Kiriama, H. 1993; Soper, R. 1982). This is marked by a visible transition between the earlier Kwale/Kwamboo Ware pottery recovered from early iron-working, farming settlements, and the later Maore Ware pottery, which is seen to supersede it. So far, Maore Ware has been identified in the South and North Pare Hills (Soper, R. 1967b; Odner, K. 1971a), Kilimanjaro (Odner, K. 1971b) the Taita Hills (Collett, D. 1985) and the Chyulu Hills (Soper, R. 1976). At the site of Usangani, both Kwale/Kwamboo Ware and Maore Ware are seen to occur together. Radiocarbon dates put this change to between the 6th and 10th centuries AD (Odner, K. 1971a; Soper, R. 1982).

In contrast, along the coast of Tanzania and Kenya, the recognition of similar continuity has only now begun to emerge. As we have already seen, no firm evidence for the existence of early iron-working, farming populations had been identified north of Mombasa. Yet there is clear archaeological evidence for the emergence of developed urban settlement from the 8th century AD onwards (Horton, M. 1987a, 1987b; Sutton, J. 1994/5; Wright, T. 1993). To the south, whilst evidence for early iron-working, farming communities had been identified, evidence for this settlement first appeared to be situated away from the coastal littoral, and did not seem to extend much beyond the 4th century AD (Chami, F. 1994; Phillipson, D. 1977). At the same time, despite new radiocarbon evidence to the contrary, it was believed that the arrival of early iron-working, farming communities proceeded some centuries after the early textual references to the existence of East African coastal trade entrepôts during the 1st century AD (Casson, 1989). Hence there was a problem of apparent discontinuity between the 1st century AD *Periplus* peoples, and the 8th century urban coastal littoral; the relationship between these earlier, presumably Southern Cushitic agro-pastoralist peoples, the later Bantu-speaking coastal, iron-working, farming communities and the ethno-linguistic origins of early Swahili coastal peoples.

The earliest levels of excavated urban littoral settlements were seen to be characterised by a distinctive local pottery, alternatively referred to as Tana Tradition (Abungu, G. 1989; Horton, M. 1984) or Triangular Incised Ware (Chami, F. 1994). This pottery was seen to form a relatively homogeneous group along the full 3000 km length of the Swahili coast, and in places extended several hundreds of kilometres inland (Abungu, G. and H. Muturo, 1993; Horton, M. 1996; Schmidt, P. 1994/5). Despite this apparent homogeneity, the terms Tana Tradition (TT) and Triangular Incised Ware (TIW) are still used interchangeably.

The term Tana Tradition has been adopted to illustrate a basic unity between the shared coastal littoral and hinterland pottery, which was first observed at Wenje on the River Tana (Abungu, G. 1989: 114-115; Horton, M. 1984, 1996: 243-244). Hence by naming this pottery after a settlement from the interior, it explicitly sought to deconstruct a previous bias towards the Swahili and the urban coastal littoral. However, at the same time, the term Tana Tradition was seen to perpetuate the notion of a 'northern' origin for early Swahili communities. In response, the alternative term Triangular Incised Ware was proposed by archaeologists working in central coastal Tanzania (Chami, F. 1994: 13). This sought to provide a neutral descriptive term, which escaped previous functional, ethnic or geographical bias. Unfortunately, this term also appears unsatisfactory (Haaland, R. 1998: 287; Horton, M. 1996: 409). Incised triangles do not constitute the only decorative motif which characterise this pottery group. In fact over 70% of the motifs visible are not triangular incisions (Chami, F. 1994: 76). Similarly, neither can this pottery be seen to encompass a single ware. The use of the term ware should be dependent upon the unity of the ceramic fabrics. However, as Lindahl (1994) has shown, fabrics seem to be both locally specific and extremely variable (see also ongoing research in Ndiri, W. 1999).

Rather than favouring one term above the other, this thesis uses a combined TT/TIW term. This recognises that ultimately, the deciding factor for which of these terms is employed would seem to be dependant upon which original ethno-linguistic identity is favoured for these early coastal communities. Hence those who see the antecedents of the early coastal Swahili as Southern Cushitic speaking, stone-working, agro-pastoral communities originating from northern Kenya, and southern Somalia invariably continue to refer to TT pottery, preferring its geographical specificity (Abungu, G. 1994/5, 1998; Horton, M. 1984, 1990). In contrast, those who adopt the term TIW have tended to argue for an origin amongst the Bantu speaking, early iron-working, farming communities identified on the central coast of Tanzania (Chami, F. 1994, 1994/5; Haaland, R. 1994/5; Schmidt, P. 1994/5).

Justification for the ethno-linguistic origins of the middle iron-working, farming communities was sought through a typological examination of TT/TIW ceramics. Phillipson (1977, 1979) first introduced the idea that TT/TIW materials retained certain stylistic elements from Kwale Ware pottery, thus emphasising continuity with the earlier Bantu speaking, iron-working, farming peoples. However, following a statistical comparison of the regional variants of the 'Mwitu tradition', Collett (1985: 55) found little or no typological relationship between Kwale Ware and TT/TIW. Preliminary analysis of the TT/TIW assemblage recovered from the northern coast (Wilding, R. 1977) and Shanga (Horton, M. 1984), seemed to reinforce Collett's statement. As a result, and influenced by the thoughts of Allen (1993), evidence for the existence of a pre-

Bantu, presumably Southern Cushitic speaking and agro-pastoralist population was sought (Horton, M. 1990).

Earlier stone-working, agro-pastoral sites are seen to be widely distributed in Central Kenya (Ambrose, S. 1982, 1984; Bower, J. *et al.* 1977, 1984, 1991; Collett, D. and P. Robertshaw, 1983). Comparison of TT/TIW materials excavated from Ungwana and the River Tana valley by Abungu (1989: 147-149) with mid first millennium BC materials from Narosura, in the Western Highlands of Kenya (Odner, K. 1972), and the later 9th century AD assemblage from Deloraine Farm (Cohen, M. 1972; Sutton, J. 1993) suggested a number of shared decorative attributes. Similarly, Horton (1996: 410) argued that stylistic elements from stone-working, agro-pastoral sites at Maringishu, Akira (Bower, J. *et al.* 1977; Collett, D. and P. Robertshaw, 1983a) and Seronera (Bower, J. 1973) are incorporated within the Shanga TT/TIW assemblage.

Whilst recognising that some of the decorative elements on TT/TIW pottery were also present on Kwale Ware assemblages, Abungu (1989, 1994/5) maintained that such elements reflected the later assimilation of an originally Southern Cushitic, stone-working, agro-pastoral tradition by migrant Bantu, iron-working farming peoples. The distribution of TT/TIW was known to correlate well with the distribution of Bantu Sabaki speaking populations (Horton, M. 1987b; Nurse, D. and T. Spear, 1985; Spear, T. 1999). In this context a rapid shift from Southern Cushitic to a Bantu language would have had to have taken place (Nurse, D. and T. Hinnebusch, 1993; Pouwels, R. 1999: 291).

Exploring the central coast of Tanzania, Chami (1994, 1998) drew attention to many of the disparities inherent in the acceptance of a northern, Southern Cushitic stone-working, agro-pastoral origin. The identification of early iron-working, farming communities both on the coastal littoral and off-shore islands indicated the presence of Bantu speaking populations during the time of the 1st century AD *Periplus* reference. Recognising that the earliest sites with TT/TIW pottery are also distributed within the areas of known Kwale Ware settlement, Chami argued that the middle iron-working, farming communities evolved directly from the preceding early iron-working, farming population. Chami's (1994: 69-82) comparison of the ceramic attributes found that individual decorative attributes identified on Kwale Ware were seen to overlap with later TT/TIW pottery. In addition, the frequency of these Kwale Ware attributes were seen to decline as TT/TIW developed over time. Correlation of the ceramic attributes with radiocarbon dates led Chami to argue for a transitional phase between Kwale Ware and TT/TIW. This Mwangia phase was thus seen to emerge out of the early iron-working, farming Kwale Ware during the 4th and 6th centuries AD, evolving into the maturity of the TT/TIW pottery of middle iron-working, farming communities by the 6th and 7th centuries AD.

Chami's (1994) analysis has not escaped criticism. Horton (1996: 410) has questioned Chami's classification of Kwale Ware and TT/TIW traits. He criticised Chami's attribution of punctates as a Kwale Ware characteristic, hence exaggerating the overall percentage overlap with the later TT/TIW pottery. At the same time, his materials were taken from TT/TIW sites only. His analysis was undertaken before a clear stratigraphic sequence from an early to middle iron-working, farming site had been identified.

Attempts to define the ethno-linguistic origin of early coastal communities have two fundamental problems. Firstly, both arguments are derived from an inadequate assessment of the TT/TIW ceramics. Regional surveys have produced regional analyses. As Horton (1996: 400) has noted: '*In the area of densest Early Iron Age settlement, Tana tradition pottery has a small number of Early Iron Age traits, while in the north there are a similar number of Pastoral Neolithic traits. Neither on its own implies an origin* '. Secondly, both arguments incorrectly assumed a simplistic, one to one correlation between archaeologically defined cultures and ethno-linguistic identity.

The spatial distribution of TT/TIW has still not been fully mapped (see figure 3.2). As yet, the earliest TT/TIW settlements identified on the northern coastal littoral, are those located in the Lamu Archipelago at Shanga (Horton, M. 1984; 1987b, 1996), Manda (Chittick, N. 1967, 1984; Horton, M. 1986), and Pate (Wilson, T. 1982; Wilson, T. and A. Omar, 1997). These have all been seen to date no earlier than the 8th century AD. Indeed, the majority of TT/TIW sites, notably Ungwana (Abungu, G. 1989; Kirkman, J. 1966), Mbui (Wilding, R. 1973), Takwa (Kirkman, J. 1957a; Mutoro, H. 1979; 1988a) and Kiunga (Wilson, T. 1978), would all seem to be concentrated around the 9th and 10th centuries AD and later (Horton, M. 1996: 23-25).

In Somalia, survey has substantially added to our knowledge of the far northern coastal settlements (Chittick, N. 1969b, 1979; Dualeh, A. 1990; Juma, A. 1996; Sanseverino, H. 1983; Wilson, T. 1984). However, despite the occurrence of the important 1st century BC to 5th century AD site of Ras Hafun, just south of the Horn (Chittick, N. 1979; Smith, M. and H. Wright, 1988), no early TT/TIW pottery has so far been recovered north of Gezira (Horton, M. 1996: 407-408). Indeed, limited excavations at Mogadishu, Merca, Barawa, and Bur Gao have failed to identify much settlement evidence before the 11th century AD (see Sinclair, P. 1991: 182).

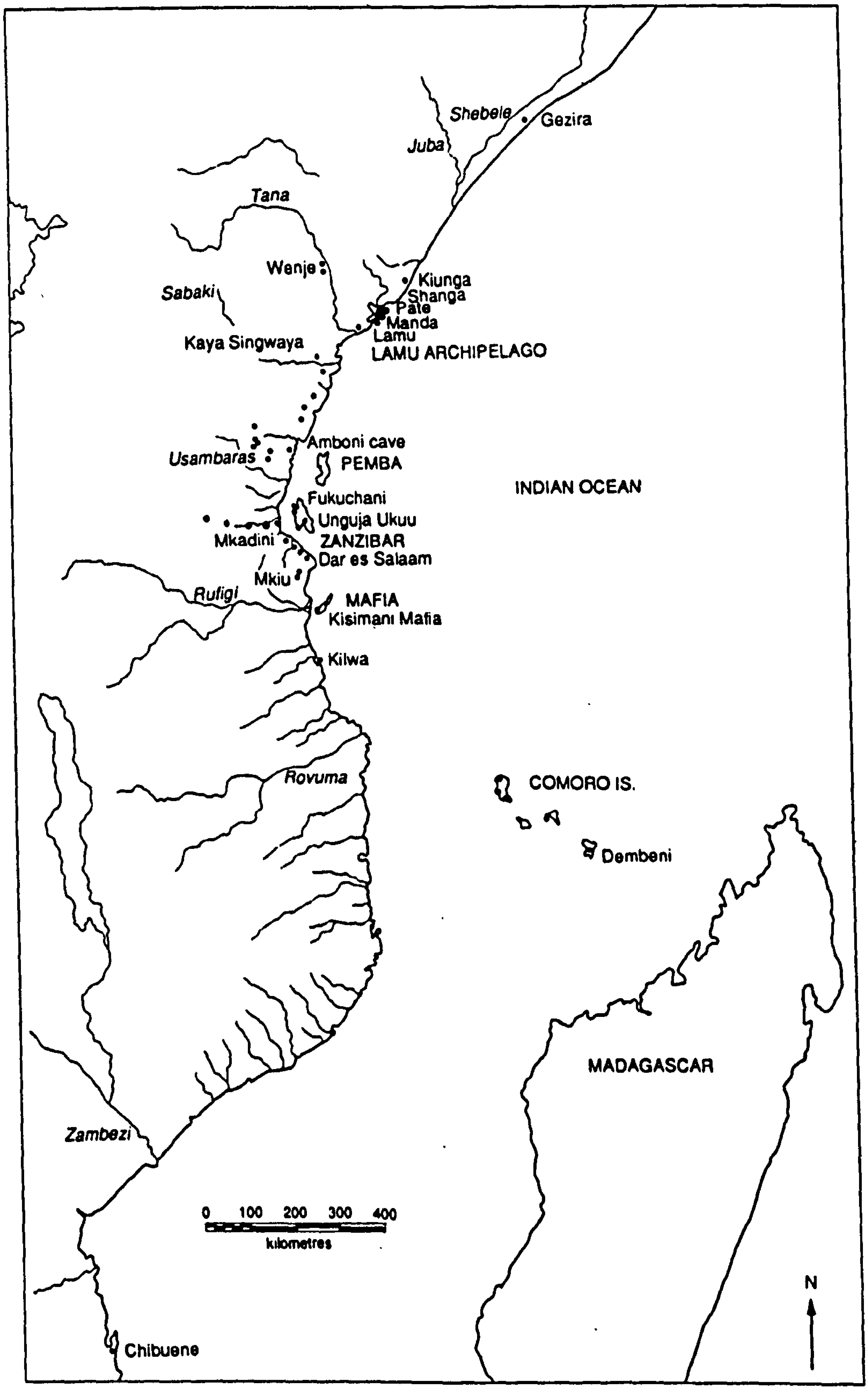

Figure 3.2 The known distribution of early Tana Tradition/Triangular Incised Ware pottery in East Africa (from Horton, M. 1996: 408 figure 306)

Along the River Tana valley, survey has identified several inland sites with ceramic material typologically the same as that evident on the earliest coastal littoral sites (Abungu, G. 1989, 1998; Phillipson, D. 1979). None of these sites have been radiocarbon dated, but it is possible that they might prove to be some centuries earlier than those dates recovered from pre-urban levels on the coastal littoral (Horton, M. 1990, 1996). Indeed, recent surface survey along the upper valley of the Tana River (Kiriama, H. *et al.* 1996) has provided further evidence for TT/TIW settlement, often associated with iron production, and in some cases with earlier Kwale Ware ceramics.

Considerably fewer TT/TIW sites have been identified on the central and southern coastal littoral and hinterland of Kenya (Abungu, G. 1991; Wilson, T. 1980, 1982). Most of those urban settlements which have been excavated, including Kilepwa (Kirkman, J. 1952), Gedi (Kirkman, J. 1954, 1960, 1963, 1973) and Jumba la Mtwana (Kirkman, J. 1975) are seen to have been first established from the first half of the second millennium AD onwards. Only at Mombasa (Sassoon, H. 1980), Tiwi (Davison, S. 1992, 1993), Galu (Kusimba, C. 1993a) and Mtwapa (Kusimba, C. 1993b, 1995) has ceramic evidence suggested a first millennium AD date. Survey along the Sabaki River valley, both by Collett (1985) and later by Tinga (1993), have recorded several occurrences of TT/TIW pottery. Similarly, Mutoro's (1985, 1987, 1991, 1994/5) excavation of four Mijikenda Kaya settlements has provided evidence of TT/TIW ceramics in the coastal hinterland between Malindi and Mombasa. Thermoluminescence tests on pottery sherds recovered from Kaya Mudzi Mwiru, gave a date in the 10th century AD (Mutoro, H. 1987: 185; n.d.). However, the earliest TT/TIW pottery identified at Kaya Singwaya was dated to the 15th and 16th centuries AD (Mutoro, H. 1987: 178). Unfortunately Mutoro's typological analysis of the pottery does not account for the spatial and temporal distance between each excavated Kaya site.

The earliest TT/TIW sites so far identified are now seen to be concentrated on the off-shore islands and mainland coastal littoral and hinterland of Tanzania (Chami, F. 1994; Kessy. E. 1997; La. Violette *et al.* 1989; Schmidt, P. *et al.* 1992; Wembah-Rashid, J. 1991). Amboni Cave, situated near Tanga, gave a single early radiocarbon date of AD 360 ± 130 (N349) (Soper, R. 1967b: 31), and comparable dates have also been obtained from Misasa, situated south of Dar es Salaam (Chami, F. 1994: 91) and at Unguja Ukuu on Zanzibar Island (Juma, A. 1993). However, other sites, notably at Mpiji and Kaole north of Dar es Salaam, at Kiwangwa and Masuguru in the hinterland of Bagamoyo, and the main occupation levels at Misasa, all consistently give radiocarbon dates of between the 6th and 10th centuries AD (Chami, F. 1998: 209; Chami, F. and P. Msemwa, 1997a: 674-675).

A number of TT/TIW sites have been associated with sherds of earlier Kwale Ware pottery. At Kivinja and Mukukutu, both situated north of the Rufiji Delta, the TT/TIW sherds are clearly seen to be stratigraphically later than Kwale Ware (Chami, F. and P. Msemwa, 1997a; Chami, F. and B. Mapunda, 1998). Elsewhere this relationship appears to be less clear. Kwale Ware sherds are reported from the early TT/TIW settlement of Unguja Ukuu, on Zanzibar Island (Chittick, H. 1966b; Horton, M. 1992; Horton, M. and C. Clarke, 1985; Juma, A. 1996), and from Pemba (Horton, M. *forthcoming;* La Violette, A. and J. Fleisher, 1995). Similarly they have now been identified at Kilwa Island (Chittick, N. 1966a; 1974; Matteru, E. *et al.* 1989; Chami, F. and P. Msemwa, 1997a), and in Dar es Salaam (La Violette A. *et al.* 1989; Msemwa, P. 1992; Schmidt, P. 1994/5). At Kwale Island, there is a clear temporal break between Kwale Ware settlement and the later TT/TIW occupation (Chami, F. and P. Msemwa, 1997b). In contrast, at Dakawa on the River Wami (Haaland, R. 1994/5), and at Mlaguzi and Chabula in the Nguru Hills (Thorp, C. 1992) there is a considerable overlap, with stratified horizons bearing both Kwale Ware and TT/TIW pottery. A parallel sequence is attested on the north-east shore of Lake Nyasa and near the south-east shore of Lake Tanganyika, south-west Tanzania (Mapunda, B. 1995; Schmidt, P. 1994/5). If this is correct, then the presence of TT/TIW sherds some 900 kms inland will have important implications to our understanding of local TT/TIW development.

The southern limits of TT/TIW are less well explored. Evidence of early TT/TIW pottery is recorded at Chibuene and Inhambane on the southern coastal littoral of Mozambique (Sinclair, P. 1982, 1987). At Chibuene, radiocarbon dates suggest an early period of initial settlement between the 6th and 8th century AD. Inhambane is dated by a single radiocarbon date to the 8th century AD (Sinclair, P. *et al.* 1993: 419). Similar local pottery has been recovered from the hinterland site of Nchachengue, and this site is dated to the 7th century AD (Sinclair, P. *et al.* 1993: 419). In the Comoro Islands, TT/TIW pottery has been identified on sites associated with the Comorean Dembeni phase (Allibert, C. 1990; Wright, H. 1984). This has been broadly dated to the 9th and 10th century AD. At present, no TT/TIW ceramics have been identified on Madagascar (Wright, H. 1993: 660). Despite this, evidence for contemporary contact is supported by the presence of distinctive red-slipped bowls which are found in other TT/TIW assemblages located as far apart as Chibuene and Shanga (Juma, A. 1996; Pouwels, R. 1999; Wright, H. 1993).

The early dates obtained from TT/TIW sites from Tanzania and the site of Chibuene are given independent confirmation from imported goods. At Chibuene, a fragment of green glazed ware probably from Sohar on the Omani coast, and also present at Ras Hafun, is dated between the 1st century BC and 5th century AD (Sinclair, P. *et al.* 1993:419). At Kivinja, early imports included glass, comparable to wares observed at the Graeco-Roman site of Fayum in Egypt and pottery with a milky-white paste glazed with alkaline green and blue that was produced in the Middle East from the 3rd century BC (Chami, F. and P. Msemwa, 1997a: 674-675). At Mkukutu, glass beads probably deriving from Egypt, were associated with Limbo phase early iron-working, farming pottery, one of which, made of segmented gold/silver in glass was probably manufactured in Rhodes between the 2nd century BC and 2nd century AD (Chami, F. *pers. com.*). Other sites, notably at Unguja Ukuu and Misasa, have imports from India, the Middle East, and the Roman world dated to between the 5th and 7th centuries AD, as well as later 9th century Persian Sassanian pottery (Chami, F. and P. Msemwa, 1997a: 675). Thus there is now clear evidence of continued external trade relationships throughout the whole of the first millennium AD.

Little is known about the early social and economic organisation of these coastal settlements. As yet, there is no material that can shed light on the full domestic subsistence of these communities, the type of house structures, community size or the organisation of internal social groups. Imported goods seem to concentrate on coastal littoral sites. These often form less than 10% of the available material assemblages on excavated sites, and perhaps had a role in the differentiation of status within local communities (Wright, H. 1993: 661). Very few imported goods appear to reach inland settlements (Abungu, G. 1989; Chami, F. 1994) and in some cases would appear to be entirely absent (Haaland, R. 1994/5). Evidence for iron-working production, although not recovered from all settlements, is widespread. It would seem that iron formed an essential local product, perhaps with specialised production centres, as suggested at Limbo (Chami, F. 1994: 43; Schmidt, P. 1995: 142), Dakawa (Haaland, R. 1994/5) and Galu (Kusimba, C. 1993), which would have supplied the contemporary markets on the coastal littoral. At such sites, other local trade commodities would have included ivory, timber (including mangrove poles and hardwoods), tortoise shell, ambergris, amber, rock crystal, gold and perhaps slaves (Horton, M. 1996: 414-416).

The fragmentary evidence for early subsistence economies means that former diets can only be partially reconstructed. The exploitation of marine resources is well known from settlements on the coastal littoral, notably at Shanga (Horton, M. and N. Mudida, 1993), Manda (Chittick, H. 1984); Pate (Wilson, T. and A. Omar, 1997), Unguja Ukuu (Horton, M. *forthcoming*), Kilwa (Chittick, N. 1974), Chibuene (Sinclair, P. 1982, 1987: 86-90) and sites in the Comoros (Wright, H. 1984). Hunting of wild fauna is also indicated, both by the presence of iron arrow heads, and by the bones of a wide variety of wild species (Chami, F. 1994: 45; Haaland, R. 1994/5). Evidence for domestic cattle and sheep/goat, whilst present on most settlements from an early period, would seem to form only a minor component of the diet before the 10th century AD (Chami, F. 1994; Horton, M. 1996, *forthcoming;* Sinclair, P. *et al.* 1993; Wright, H. 1984). At Shanga the presence of camel is attested from the 10th century AD (Horton, M. 1996: 385). Whilst there is little evidence for cultivated crops, the few exceptions being sorghum grains reported at Kilwa (Chittick, N. 1974: 236), coconut at Misasa, Mpiji and Kaole (Chami, F. 1994: 45) and coconut, millet, rice and beans in the Comoros (Hoffman, E. 1984; Wright, H. 1993), it would seem that the pattern of wild and domestic fauna represents a developing mixed agricultural economy.

During the middle iron-working, farming period, houses were of clay and wood structures, and perhaps continuing the tradition of their Eastern Bantu ancestors, were rectangular in shape (Horton, M. 1996: 224-242; Ehret, C. 1998: 114-117). At present there are too few open-plan excavations to reconstruct initial settlement structure. Horton's (1984, 1996: 84-85) large scale excavation has demonstrated that at Shanga, the early layout was already formalised around an inner and outer enclosure entered by four gates laid out accurately on cardinal axes, and apparently representing four demes (see figure 3.3).

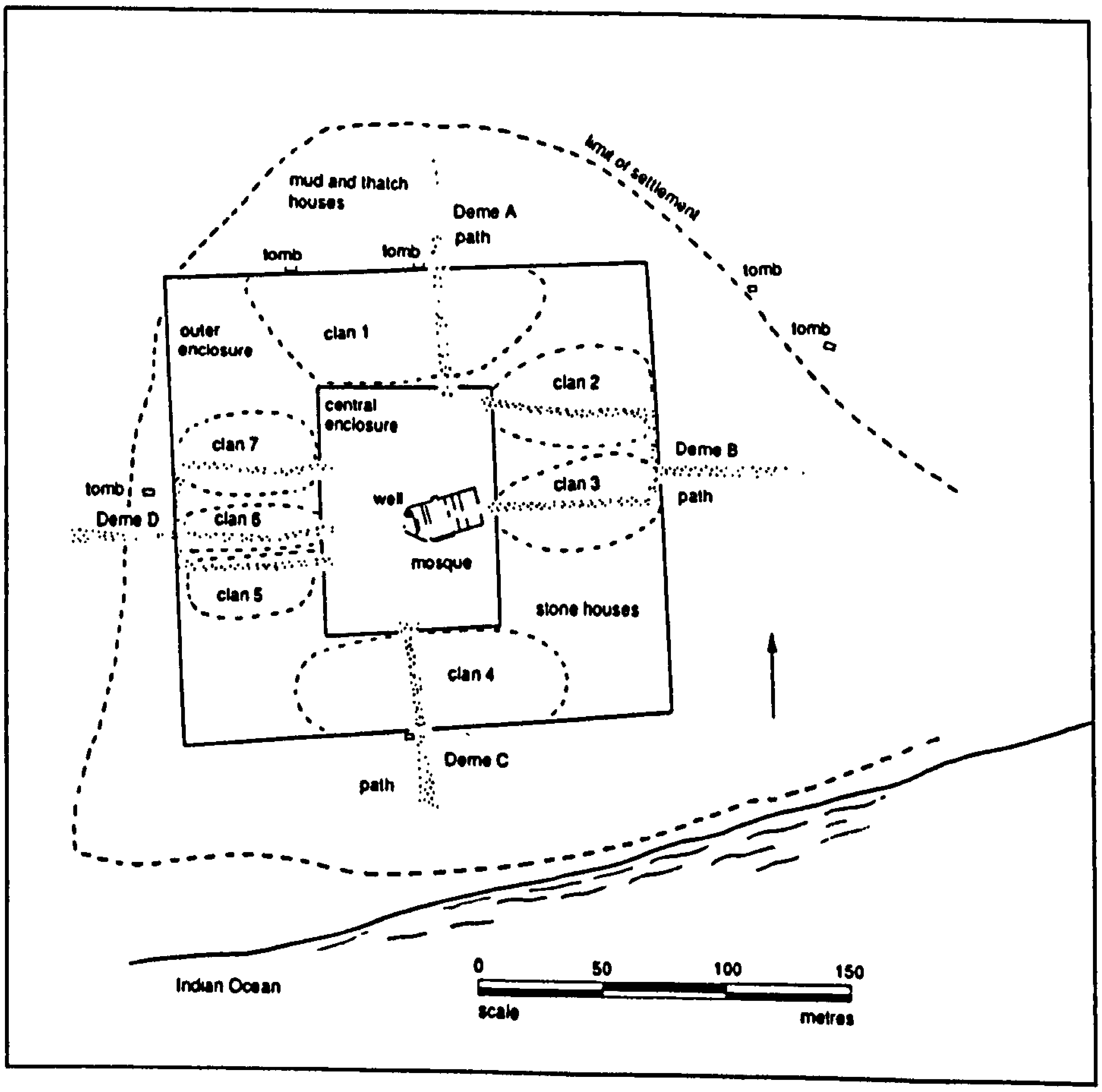

Figure 3.3 Reconstructed settlement structure at Shanga (from Horton, M. 1996: 84, figure 41)

Carefully considering the intra-site patterning of excavated materials, Horton (1996: 411) speculated that each deme could well represent separate groupings of agriculturalists, pastoralists, traders and craftworkers. Hence the constituent elements of Shanga formed the basis of what Horton (1996: 411) called 'a multi-ethnic society'.

Within each deme the settlement organisation was seen to represent seven separate clan areas, each of whom had there own separate gate into the central enclosure. Such settlement structure has significant parallels with contemporary Mijikenda Kaya settlements of the coastal hinterland (see Chapter 2, figure 2.2). Shanga would thus seem to retain remnants of an initially pre-Islamic, early autochthonous settlement structure (Horton, M. 1993).

3.5 Towards regionalisation: the later iron-working, farming communities

Between the middle and later iron-working periods an emerging hierarchy in the pattern of settlement is evident (Wilson, T. 1982). At the upper end were the increasingly 'monumental' settlements like Manda, Shanga, and Pate off the mainland of northern Kenya; Kilwa and Jongwe off Tanzania; and Dembeni on the Comoros, all of which both expanded in size, and were rebuilt in *Porites* coral stone, yet still retain some of their earlier architectural forms and the existing settlement structure (Horton, M. 1996: 399; Wright, H. 1993: 665-670). At the lower end are the many more, but less well-known rural villages and hamlets with no evident substantial architecture, and thus of only minimal archaeological visibility. At each level, these settlements shared close economic and political links within their autonomous, but interconnected regional polities (Abungu, G. 1991; Duarte, R. 1993).

Through this growing regionalisation the apparent homogeneity of the TT/TIW pottery is also seen to diverge. According to Chami (1998), between the 10th and early 13th centuries AD the TT/TIW pottery reported from the southern coastal regions south of Tanga is markedly different from that in the north. This new ceramic phase is termed Plain Ware due to the marked absence of decoration. Similar pottery has not yet been reported from excavated sites in Kenya, where the contemporary pottery (TT phases B and C) would appear to retain most of the earlier TT/TIW attributes, though with increasingly simpler motifs and with a more restricted area of application (Horton, M. 1996: 256-266; Wilson, T. and A. Omar, 1997: 42-46).

Many of the sites associated with this Plain Ware have a notable absence of imports. Chami (1998: 212) suggests that this might represent a decline in external trade links with the southern coastal regions. Indeed, many of the earliest TT/TIW settlements particularly in the immediate coastal hinterland seem to have declined at this period (Chami, F. 1994: 99-101). However, other settlements, notably those located on the islands of northern Kenya and Tanzania continued to grow (Chami, F. and P. Msemwa, 1997b; Fawcett, W. 1992). It is probable that this shift resulted due to a realignment of the existing economic and political networks. From the 11th century AD over seas trade seems to have shifted in emphasis away from the Persian Sassanian ports and the Gulf, to the Red Sea and closer ties with the Middle East (Horton, M. 1987a; 1996: 417).

This change closely corresponds with the northern adoption of majority Islam. Several early mosque-like structures have been reported on island settlements of the middle iron-working, farming period, the earliest so far being that at Shanga, dated to the later 8th century AD (Horton, M. 1996: 397-398). However, from the early 10th century AD, these mosques were rebuilt in coral stone, and at Shanga, from the 11th century AD appear to have been large enough to cater for the male majority (Horton, M. 1996: 400-401). Chami (1998: 213) argues that the adoption of Islam was principally restricted to the coastal islands and littoral settlements of northern Kenya. Hence these communities continued to flourish, whilst Muslim antagonism towards the non-Muslim communities of the immediate hinterland and southern coastal mainland, who do not seem to have adopted Islam increased. Thus during the 11th and 13th centuries AD, the northern coast, and off-shore islands were able to develop their external overseas connections, whilst the southern littoral and hinterland became increasingly independent and self sufficient.

Despite this growing heterogeneity, from the late 13th century AD onwards, both the northern and southern coast appear to have begun to resume closer ties. Comparison of the local ceramics from northern and southern communities at this time reflects broad stylistic similarities. In the north, the TT/TIW pottery (TT phase C) is seen to have evolved into its later form (TT phase D). This is closely similar to pottery of the same period known from the central Tanzanian coast (Chami, F. 1998), northern Mozambique (Duarte, R. 1993), and as far as Madagascar (Radimilahy, S. 1998). Chami (1998: 213) refers to this ceramic phase as Neck Punctate pottery, due to its characteristic decoration by a line of punctates on the neck. However the presence of 'residual' incised oblique lines and triangles within the Neck Punctate wares is also seen by Chami to reflect its essential evolution from the later northern TT/TIW pottery (Horton, M. 1996; Wilson, T. and A. Omar, 1997; Sinclair, P. 1990).

For Chami (1998), the return to a 'pan-East African coastal tradition' represents the full emergence of an Islamic, Swahili urban culture. Indeed at this time the northern Swahili language began to reassert influence over the later development of southern Swahili dialects (Nurse, D. and T. Hinnebusch, 1993: 506-510). By the 13th century archaeological evidence for the southern coastal littoral and islands conversion to Islam is substantial (Wright, H. 1993). The spread of Islam from the northern coast is also well documented through the later traditions of a southwards movement of so-called immigrant 'Shirazi' Muslims extending as far as Kilwa and the Comoro Islands (Horton, M. 1996: 423-425; Pouwells, R. 1987: 32-37). At the same time, this shift towards the southern coast was fuelled by the developing gold trade between Kilwa on the Tanzanian coast (Chittick, H. 1974) and Sofala on the Mozambique coast (Duarte, R. 1993) with the main gold-producing areas in Zimbabwe and the northern Transvaal (Sinclair, P. 1987).

In the Eastern Highlands, these later trends are less well understood. Whilst emphasis is placed on increasing regionalisation as groups learned to exploit their individual socio-natural environments (Schoenbrun, D. 1993; Schmidt, P. 1997a), the emerging picture is also confused by a complex pattern of myriad small-scale population movements identified both through historical linguistics and local oral traditions (Ehret, C. 1984; 1988b).

In the Chyulu Hills of southern Kenya, sherds exhibiting 'Maore' characteristics (Soper, R. 1976) were seen to be part of a larger assemblage exhibiting a variety of decorative characteristics associated with the later iron-working, farming site of Gatung'ang'a (Siirlainen, A. 1971). It would thus seem that there are sufficient aspects in common to argue for continuity between 'Maore' and 'Gatung'ang'a Ware' (Soper, R. 1980; 1982). The site of Gatung'ang'a, situated on the south-western foothills of Mount Kenya, would seem to reflect continuity from the later stages of the eastern highland Kwale/Kwamboo Ware (Siriiainen, A. 1971; DiBlasi, M. 1980). In contrast to the coastal regions, radiocarbon dates have so far given an occupation dating between the 12th and 15th centuries, suggesting a considerable longevity of the early iron-working, farming traits.

Gatung'ang'a Ware exhibits a broad distribution over much of the Central and Eastern Highlands of Kenya. From the slopes of Mount Kenya (Soper, R. 1979), its distribution extends west to Nyandarua in the Abederares, south to Ngong, east to the Kilungu area of Machakos District, and southwards through Chyulu Hills and Taita Hills, with some attributes also identifiable in the Pare Hills of north east Tanzania (Soper, R. 1980) and Rombo (Kiriama, H. 1993). It is not clear how long Gatung'ang'a Ware continued to be made. It has been suggested that there is a break in the ceramic sequence, marking the end of

Gatung'ang'a Ware and the antecedents of modern pottery traditions (Phillipson, D. 1977). The radiocarbon dates from the Chyulu Hills suggest it continued at least into the 16th century AD (Soper, R. 1976). Soper (1976) has drawn parallels with modern Kamba pottery, suggesting a general continuity from Kwamboo Ware and Maore Ware through to Gatung'ang'a Ware up to the present. Such a pattern would suggest Gatung'ang'a Ware reflected a later iron-working, farming sub-stratum, before the emergence of existing differentiation into more localised group identities.

Often historical reconstruction, with emphasis on traditions of migration and cultural interaction do not fit with this picture of continuity. Soper's (1979, 1982) later call for caution in trying to meld the two together is still very relevant today, with a general lack of archaeological evidence preventing any firm conclusions being made. Indeed, we are still dependant upon Collett's (1985) ceramic seriation of early Mwitu tradition regional variants, including Kwale and Kwamboo pottery, with the later Gatung'ang'a Ware. His results led him to identify three ceramic phases representing the development of a single tradition from the early, middle and later iron-working, farming periods, with the modern day pottery in the area probably representing a fourth and final phase. For Ehret (1998: 187) the societal continuity required for the observed archaeological record is matched by linguistic evidence for Upland Bantu speakers. However, Huffman and Herbert (1995), using a combination of comparative linguistic evidence have recently questioned Gatung'ang'a Wares association with the early iron-working, farming Mwitu tradition. Whilst not conclusive, they argue that Gatung'ang'a Ware and the associated contemporary Thagicu speaking Kamba/Kikuyu populations *'represent a major break'* from the 'Eastern Bantu', early iron-working, farming communities. This break is based on arguments that the Kamba/Kikuyu are linguistically affiliated to 'Western Bantu' speakers who represented a later population immigration into the region during the second millennium AD (Huffman, T. and R. Herbert, 1993,1995).

A second ceramic tradition, often occurring contemporaneously with Maore and Gatung'ang'a Wares also requires explanation. This has been identified in the South Pare Hills as Group B Combed Ware (Soper, R. 1967b) and in the North Pare Hills (Odner, K. 1971a). It can also be associated with the sherds of Combed Wavy Line pottery recovered from the Taita Hills (Collett, D. 1985), at Kaya Singwaya (Mutoro, H. 1987), at Marafa and other localities on the northern side of the Sabaki River valley (Collett, D. 1985; Tinga K. 1993), along the River Tana (Abungu, G. 1989: 128, type 1g;), and the coastal towns of Shanga, in the Lamu Archipelago (Horton, M. 1996), Ungwana, Mambrui (Abungu, G. 1993) and Gedi, south of Malindi (Kirkman, J. 1954). Similar pottery is reported at Embu, (Soper, R. 1979) and elements are also incorporated within Group C pottery from Kilimanjaro (Odner, K. 1971b). Radiocarbon dates from this ceramic tradition have been recovered from Shanga and the South Pare Hills (Bombo) and both suggest a date range around the 9th and 10th centuries AD Horton, M. 1996: 256).

It has been noted that these sites do not exhibit any obvious ecological separation from 'Maore' or 'Gatung'ang'a' sites in the Taita Hills (Collett, D. 1985), Kilimanjaro (Odner, K. 1971b), or Embu area (Soper, R. 1979). However, Soper notes that they tend to concentrate at the base of the South Pare Hills (Soper, R. 1967b). In addition, Soper (1967b) identified two sites with associated iron working debris, and Horton (1996) notes their correspondence with the occurrence of camel bones. It is therefore unclear how this separate tradition fits into the existing cultural sequence, but at present it would seem that its distribution around the arid areas between the coast and the eastern highlands would suggest some affiliation with non-Bantu speaking perhaps iron-working, agro-pastoralists (Collett, D. 1985; Tinga, K. 1993; Horton, M. 1996).

A further range of as yet non-attributed and localised ceramic wares is also known. These include Group D Dotted Ware and Group E Graphited Ware from the Usambara Mountains (Soper, R. 1967b), Group C Ware, Group D Ware and Group E Ware from Kilimanjaro (Odner, K. 1971b), and Raised Notched Ridge Ware from the Chyulu Hills (Soper, R. 1976) and Ithatha (group 4), near Embu (Soper, R. 1979).

Looking at the illustrated reports, it seems probable that Group D Dotted ware and Group E Graphited ware from the Usambara Mountains would fall into the category of later TT/TIW. Graphited ware is seen to occasionally occur on the same sites as Dotted Ware (Soper, R. 1967b), and more frequently on sites with TT/TIW, both in the hinterland and coastal regions of Tanzania (Chittick, N. 1966a, 1974; Chami, F. 1994). Group C Ware from Kilimanjaro appears to be an amalgam of Gatung'ang'a, Combed Wavy Line and Raised Notched Ridge wares, although the later does not exhibit the notching of the ridges, and is more a characteristic of Kilimanjaro Group D ware. Odner (1971b) himself, expresses reservations about the definition of Group C, its categorisation based more upon the internal consistency in fabric, surface colour and rim form, rather than the variability expressed in decorative style. It is unclear where Kilimanjaro Group E ware might be placed, but it often occurs in later association with Maore Ware (Odner, K. 1971b; table 1). As such, Group E might well represent a later evolution of Maore Ware. Raised Notched Ridge ware has been associated by Soper (1976) with pottery from Kilungu, and in the Aberdere Mountains, and may be related to other occurrences further north, in Laikipia District and even the Kerio Delta on Lake Turkana, and is perhaps associated with non-Bantu agro-pastoral groups who interacted with the Bantu speaking middle and later iron-working, farming communities. Interestingly, sherds similar to Raised

Notched Ridge ware are illustrated from Shanga, as type 5 in ceramic phase A (Horton, M. 1996: 254, fig. 171. f).

3.6 Conclusion: putting the evidence together

We now have a much more detailed understanding of the changing pattern of coastal settlement from the later first millennium AD onwards. Excavation has demonstrated their pre-Islamic, autochthonous beginnings and the complex interplay of later exogenous connections, which by the 11th century AD had already helped form the emergence of a prosperous, urban Muslim, but essentially indigenous mercantile community. However, whilst considerable attention has focused upon the visible monumental coastal sites, we still have a dearth of data, particularly on the smaller, rural settlements of the immediate hinterland. Evidence still does not give adequate emphasis to regional variability and the role of local communities within the wider context of social and economic change. At the same time we are still left with conflicting images of the early ethno-linguistic origins, embedded within the homogenous and bounded classification of their associated material culture.

Three alternative scenarios explaining the development of early East African coastal culture can still be seen to hold equal validity. These form certain modifications to the possibilities previously outlined by Horton (1996: 410-411).

Scenario one: in this scenario continuity from an earlier stratum of Southern Cushitic speaking agro-pastoralists is emphasised. Reaching the north Kenya coast from the end of the first millennium BC, they adopted a specialised and maritime way of life and through contact with external traders, established long-distance trade relations. In this model, the Bantu origin of the Swahili language, and the presence of TT/TIW pottery within the hinterland is explained as a result of later interaction with Sabaki-Bantu speaking, agriculturalists. Emerging on the central coastal hinterland of Tanzania, these Kwale Ware producers would have both encountered and been partially integrated into the emerging coastal network as it expanded southwards along the coast. Within this framework, TT/TIW pottery is believed to be unrelated to the early iron-working, farming communities. Hence the northern coastal sites with TT/TIW would be expected to date back at least to the 1st century AD. However, at present this does not seem to be the case.

Scenario two: it is now possible to place the beginnings of early iron-working, farming settlement in the last centuries of the first millennium BC. As these proto-North East Coast Bantu speaking communities, who would have produced Kwale Ware pottery differentiated into the Seuta, Ruvu and Pare and Sabaki linguistic groups, the Sabaki Bantu speakers expanded into the coastal hinterland region of central Tanzania, and as far north as the southern coastal hinterland of Kenya. At this time, Kwale Ware emerged into its later transitional stage with TT/TIW pottery, hence reflecting cultural continuity between the early and later iron-working, farming periods. Continuing to differentiate, those communities who moved northwards eventually came into contact with the Southern Cushitic agro-pastoralist peoples, thus explaining the later inclusion of such elements within their regional pottery and by extension, their culture and language.

Scenario three: this follows the second scenario outlined above. However, within this model, the early first millennium AD makers of Kwale Ware are not seen to be North East Coast Bantu speakers, but rather, were an earlier stratum of Upland Bantu speakers. Hence TT/TIW pottery does not share typological continuity with Kwale Ware, but rather represents the later 4th century AD arrival of North East Coast Bantu speakers. These would have first interacted with, and eventually displaced the earlier Upland Bantu peoples.

Whilst there is still insufficient evidence to properly evaluate these scenarios the beginnings of a coherent interpretative whole is now beginning to emerge. Firstly, there is clear evidence for well-established early iron-working farming settlement at the start of the first millennium AD. Secondly, we can now recognise the existence of pre-urban TT/TIW settlements from the 6th century AD with early transoceanic trade contacts. Thirdly, the wide distribution of TT/TIW pottery is now seen to reflect autonomous regional networks of local production and exchange, and at least for the north, some evidence for a multi-ethnic and cross-cultural society.

As we have seen in Chapter 2, the traditions of Shungwaya and Mijikenda migration and settlement history would point towards the early movement of proto-Sabaki Bantu speaking communities northwards. The archaeological evidence would suggest that this movement had begun by the 3rd century AD. Similarly, the alternative interpretations of Mijikenda historiography also emphasised the interrelationship of these early agricultural Sabaki Bantu speakers with neighbouring Southern Cushitic and Eastern Cushitic speaking populations. There is still insufficient archaeological evidence to establish the basic nature of this relationship. Both the chronological limits of TT/TIW pottery and whether there is any real typological relationship with Kwale Ware need to be more definitely ascertained. Archaeology on the northern coast of Kenya has failed to provide sufficient time-depth to identify the antecedents of TT/TIW. In contrast, work undertaken on the central coast of Tanzania has now given the earliest dates so far, for both the occurrence of Kwale Ware and for that of TT/TIW. Hence it would now seem that the southern and central coast of Kenya occupies an important and intermediate position.

Chapter 4 Landscape and culture: a regional background

'It is the water and soil of a place that determines a person's language. But we are all related and all come from Shungwaya' (Interview with Mzee Juma Zani (Digo); Spear, T. 1982: 157)

4.1 Introduction

As discussed in Chapter 1, previous research is seen to have been embedded within a culture-historical epistemology. Within such a framework, discussion of the environment has often been characterised by a descriptive overview of ecological zones to which the human population is passively superimposed. An alternative, processualist methodology, has provided a more analytical or deductive framework (Jama, A. 1996; Mutoro, H. 1987; Pwiti, G. 1996; Sinclair, P. 1987), through which the relationship between human and natural elements has been explored in purely economic terms. Criticism of these *'deterministic and linear'* explanatory frameworks, whereby the environment is little more than a resource opportunity to be utilised and exploited, has led post-processual archaeologists to begin an exploration of the pluralistic, *'non-deterministic and non-linear'* dialectic relationship between the human and natural environment. The new objective in understanding what has been termed the human-modified landscape, is the examination of how both the human and natural environments have affected, and been effected, by each other (Croll, E. and D. Parkin, 1992; McGlade, J. 1995: 14).

Within the study region, we are fortunate that the Kenya Soil Survey has published reports for both Kilifi (Boxem, T. *et. al.* 1987) and Kwale Districts (Michieka, D. *et. al.* 1978). Additional research has also been carried out on the vegetation and contemporary land use of Kilifi District (Leeuwen, M. 1982; Waaijenberg, H. 1994); and a site-catchment analysis has been undertaken on the Mijikenda Kaya settlements (Mutoro, H. 1987, 1988b). The available evidence would suggest that the environmental conditions were not markedly different in the near past than is now evident, yet we still have virtually no information on how this existing human-modified landscape was formed (Masao, F. and H. Mutoro, 1988: 587; Templer, J. 1956). Two recent papers emphasise the growing awareness towards a necessary socio-economic landscape perception in East Africa. Schoenbrun (1993) examined the complex prehistoric agriculture of the Great Lakes region, and explored its eclectic relationship with population expansion, technological development, multi-cultural integration and the formation of human-modified environments. Schmidt (1997) demonstrated the destructive impact of early iron production and agricultural settlement on the forest resources of the Buhaya region, north-west Tanzania, and has shown how the depletion of these resources altered the settlement pattern and cultural values as communities sought to adapt to the changing ecology.

Similar approaches are only now beginning to be realised within the coastal regions of East Africa. Of particular significance is the on-going project, co-ordinated by Uppsala University in Sweden, entitled *'Human Responses and Contributions to Environmental Change'*, which in Kenya has focused on the northern coast and Lower Tana River area (Abungu, G. 1995, 1998; Okello, D. 1998). However, such informative studies require both the quantitative and qualitative evaluation of many sources of data. Within the confines of this research thesis we are virtually dependent upon the interpolation of data from contemporary physiography and land-use patterns. It is therefore hoped that the approach adopted here will further encourage future research in paleoenvironmental change, and a more integrated multi-disciplinary interest in the relationship between human and natural interaction.

The inter-relatedness of the human and natural context to which landscape and culture are dependent are explored through the identification of the socio-natural environments, that is, through the location of the natural physiography within the context of human social activity. To achieve this objective, this chapter locates the physiographic setting within the context of the social (linguistic and cultural) and economic (farming, pastoralism, hunter-gathering) boundaries. Because such boundaries are a construct of academic and political classification, emphasis is placed on the symbiosis between these defined socio-natural zones, past subsistence economies and ethno-linguistic units.

Once defined, this socio-natural perspective will be used in establishing a locational model through which temporal and spatial changes in archaeological site distribution can be analysed (see Chapter 5). This will form the background upon which to examine the archaeological evidence recovered from the five excavated coastal hinterland settlements (see Chapter 6), the cultural sequence suggested through the attribute analysis and seriation of ceramics (see Chapter 7), and further evidence for the subsistence economies of these early communities (see Chapter 8). Each stage will thus ensure that the role of the changing human-modified landscape is incorporated into a final interpretative framework (see Chapter 9), which will allow us to revise the clearly inadequate culture-historical background already outlined.

4.2 Regional situation

The 'eastern-African coastal belt' extends some 3000km, from Somalia (latitude 11° 00' N) to southern Mozambique (latitude 25° 00' S), its hinterland varying between 50km and 200km wide (White, F. 1983; 185). This area has been subdivided into four zones; the Benadir coast, the Swahili coast, the south eastern coast and the offshore islands, composing the Comoros Archipelago and Madagascar (Middleton, J. 1992; 2). Between the Swahili coast, lies three sub-zones, the northern Kenya coast (between Ras Kiamboni and Ras Kipini), the Nyali coast (between Ras Kipini and the southern Kenya border), and the Mrima coast (between the southern Kenya border and Cape Delgado) (Middleton, J. 1992; 2; Kusimba, C. 1993a; 31-32). This study is located within the Nyali coast, that is, between the central and southern coast and coastal hinterland regions of Kenya. The area focuses approximately between the River Sabaki, to the north, and the River Umba, to the south (bounded by latitudes 3°00' S and 4°45' S), and is situated within present-day Kilifi and Kwale Districts, respectively.[1]

4.3 Physiographic setting

This region is commonly differentiated into three main landforms: the Low Coastal Plain along the coast, the High Coastal Plain, sometimes referred to as the '*Nyika Plateau*', in the extreme west, and the Coastal Upland Ridge between (Caswell, P. 1953; Michieka, D. *et. al.* 1978). The Coastal Upland Ridge can be further differentiated into an eastern Foot Plateau, and a western '*Gyriama Hill-lands*' or Coast Range (Boxem, H. *et. al.* 1987). Both are seen to run approximately parallel with the Low Coastal Plain in broad, north-south bands.

In the north, the Foot Plateau forms a transitional zone between the Low and High Coastal Plains. In the south, these zones are separated by the Coast Range. In general, altitude ranges from sea-level along the Low Coastal Plain, to 350 m in the far west of the High Coastal Plain. However, the Coastal Range is also characterised by steep hills and erosion scarps just west of the Foot Plateau. These include from north to south, Mwangea Hill (520 m), Kinangoni Hill (352 m), Kizingo Hill (291 m), and Kizurini Hill (328 m) in Kilifi District, and the Shimba Plateau (475 m), Jombo Hill(462 m), Mrima Hill (295 m) and Kiruku Hill (188 m) in Kwale District (see figure 4.1). Each landform is considered in greater, localised detail below.

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[1] Note that northern area of Kilifi District has now been partitioned to form the new Malindi District (1997).

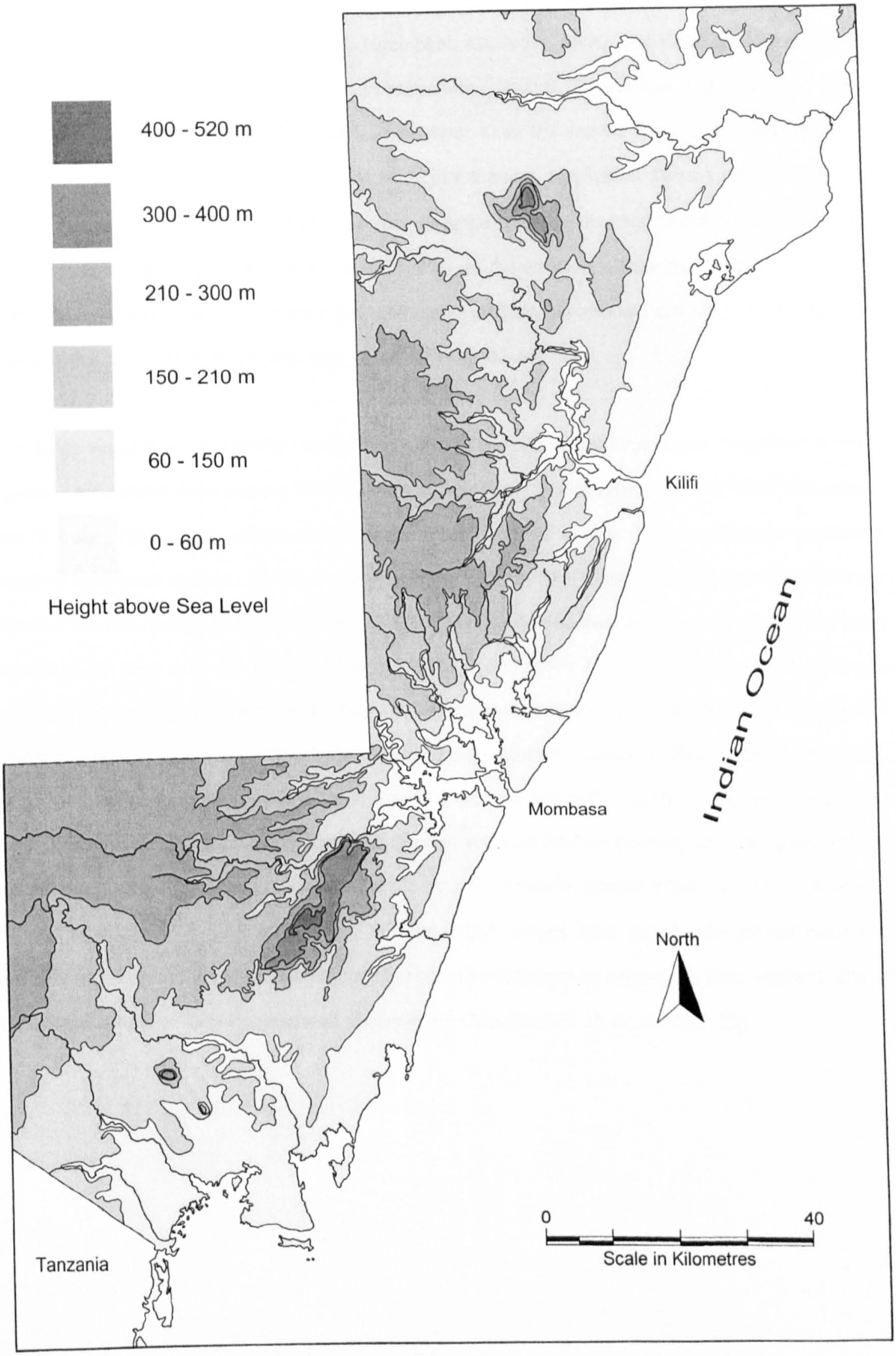

Figure 4.1 Topographic map of the southern and central coast of Kenya

The Nyali coast is dissected, west to east, by thirteen main rivers (see figure 4.3). These include, from north to south, the Sabaki, Rare, Ndzovuni, Ngombeni, Mtomkuu, Mleji, and Kombeni Rivers in Kilifi District, and the Mwache, Pemba (Cha Shimba), Mwachema, Ramisi, Mwena and Umba Rivers in Kwale District. Along the northern Low Coastal Plain, these rivers enter the sea via the inland coastal creeks at Mida, Kilifi, Takaungu, Mtwapa, Tudor and Port Reitz. In addition, the Sabaki, Mwena and Umba Rivers form important alluvial floodplains. Of all the rivers, only the Sabaki, Rare and Umba have a catchment area which extends far beyond the study region (as far as the Eastern Highlands, Taita and Pare Hills respectively). All other rivers in the area are intermittent and dry up almost completely in the long dry season (Boxem, M. *et. al.* 1987:28; Michieka, D. *et. al.* 1978: 42-44).

The natural vegetation is broadly categorised within the Zanizibar-Inhambane Regional Mosaic, represented by lowland moist and dry forest remnants (Moomaw, J. 1960; Robertson, S. 1987; Robertson, S. and Q. Luke, 1993). With reference to Moomaw (1960), a total of nine main semi-natural vegetation landscapes have been defined. As can be seen in figure 4.2, the High Coastal Plain is characterised by a dry Acacia Thorn-Bushland (*Acacia-Euphorbia*). However, moving eastwards, a greater diversity of plant communities, is seen. In the Coastal Uplands plant communities include the Lowland Dry Forests (*Manilkara-Diospyros*) and related Sokoke Forest (*Cynometra–Manilkara*); the Shale Savanna (*Manilkara–Dalbergia*); Lowland 'Miombo' Woodland (*Brachystegia-Afzelia*); Lowland Rain Forest (*Sterculia-Chlorophora/Memecylon*); and Lowland Moist Savanna (*Albizia-Anona/Panicum*). Along the Low Coastal Plain a Lowland Dry Forest on Coral Rag (*Combretum schumannii-Cassipourea*) and Mangrove Thicket (*Ipomoea pes-capre–Rhizophora mucronata*) predominate. However, human influence on this vegetation has been significant. As a consequence, the vegetation ranges from supposedly almost natural to completely artificially induced formations (notably coconut plantations or large-scale sisal estates), with all kinds of semi-natural or semi-degenerated stages in between (Boxem, M. *et. al.* 1987; 29).

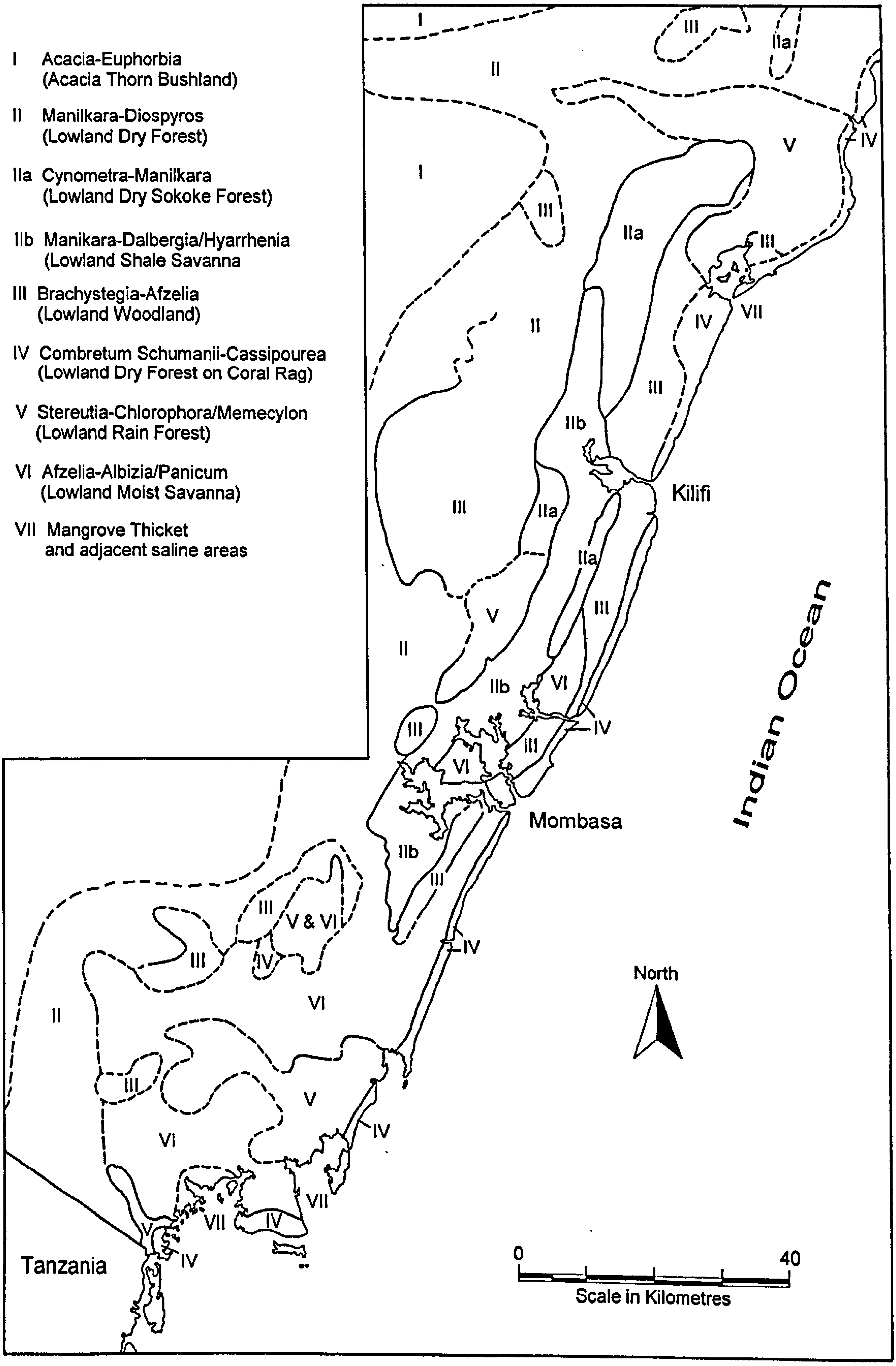

Figure 4.2 Vegetation zones (after Moomaw, J. 1960)

Within the study region, five agro-ecological zones are identified (see figure 4.3). These are seen to broadly correlate with the distribution of semi-natural vegetation types. However, the effect of climate is less evident than that caused by soil types. The definition of the agro-ecological zones is based on the annual averages of rainfall, potential evaporation and temperature (Sombroek, W. *et. al.* 1983). Thus the agro-climatic zones provide a crude evaluation of the land moisture availability and therefore agricultural potential. There distribution is influenced by the effect of the local topography of the main land forms, running south-west to north-east, and this is reflected by a corresponding decrease in moisture availability.

The average annual rainfall varies between more than 1400 mm in the south-east, to less than 700 mm in the north-west. This is distributed within two rainy seasons, the short rains between October and December, and the long rains between April and June[2]. The unreliability of the short rains has left a history of severe famines, often affecting localised regions very unevenly (Willis, J. 1993:22). The period January to March is dry and the period July to September has some intermediate rainfall. During these times, annual evaporation varies between less than 2000 mm in the south-east, to more than 2200 mm in the north-west. The mean maximum and minimum temperatures are considered to be 29.5°C and 22.8°C respectively.

Hence, high to moderately high climatic agricultural potential is seen between the moist southern Low Coastal Plain (zone II) and central Coastal Plain and southern Foot Plateau (zone III). Moving north and westwards, the environment becomes progressively drier, the northern Coastal Plain, north-east Foot Plateau and the southern Coastal Range (zone IV) having a medium climatic agricultural potential, whilst the northern Coastal Range and southern High Coastal Plain (zone V), and the drier High Coastal Plain in the north-west (zone VI) both have low climatic agricultural potentials.

However, the zones do not give any detailed indication of local micro-climates caused by the effect of vegetation, and topography. Of particular note, are the important, east-facing slopes running between the interface of the Foot Plateau and Coast Range near Kaloleni. These attract a considerably higher annual rainfall (Waaijenberg, H. 1987: 203). A similar effect is seen on the slopes of Mwangea Hill in the north, and the Shimba plateau in the south.

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[2] These seasons correspond with the monsoon winds, the local knowledge of which has been essential in maritime trade connection over the past two millennium (Horton, M. 1984; Casson, L. 1989; Chami, F. 1994).

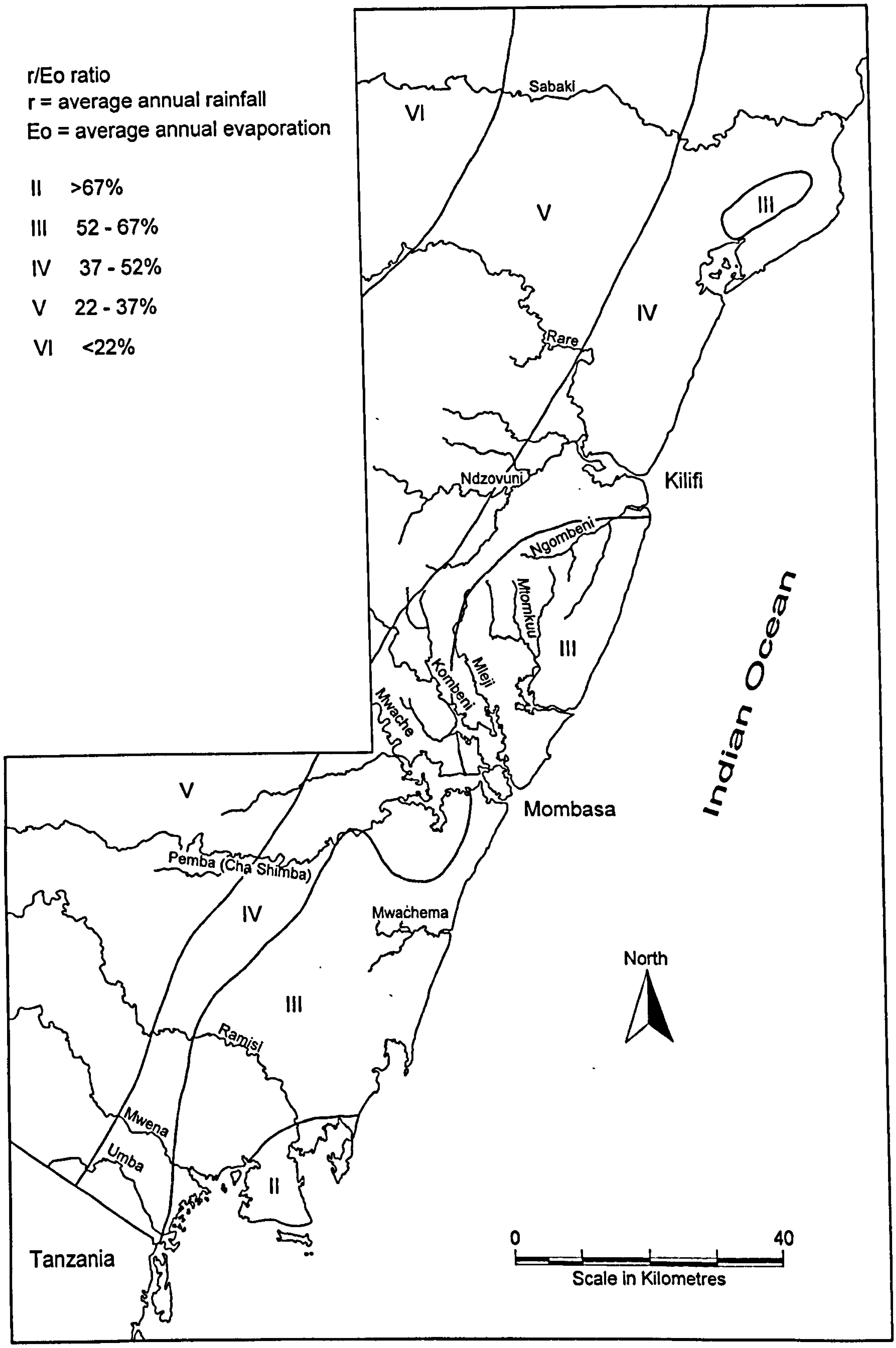

Figure 4.3 Agro-ecological zones (after Sombroek, W. *et al.* 1983)

The geology and soils of the study region consists of a succession of sediments and sedimentary rocks, again running in zones parallel to the coastline and the main land forms (Boxem, H. *et. al.* 1987; Michieka, D. *et. al.* 1978). This is best examined in relation to the topography and major vegetation types of the three main landforms (see table 4.1).

LAND FORM	SOCIO-NATURAL ZONE	GEOLOGY	SOIL FACIES	RELATIVE FERTILITY	MAIN PLANT COMMUNITIES	RELATIVE MOISTNESS	HUMAN INFLUENCE
Low Coastal Plain	Kibarani Plain	Reef Complex	Marine Deposits	Very Low – Low	Beach, Mangrove & Tidal Flat communities & Lowland Dry Forest on Coral rag & Lowland woodland	Very Moist/Saline	Not Significant
			Calcareous Sand / Rock			Very Moist	Relatively Low
		Kilindini Formation	Mainly Rock Sand / Rock Sand			Dry – Moist	Low - High
			Sand / Rock/Clay	Moderate			
Coastal Uplands (Foot Plateau)	Pingilikani Upland	Magarini Formation	Sand	Very Low – Low	Lowland Dry Forest & Sokoke Forest	Dry	Low
						Moist	High
	Lutsangani Upland	Mtomkuu Formation	Clay / Decomposed Rock	High	Shale Soil Savanna 'Maize Belt'	Dry – Moist	Low - High
			Clay			Moist	Moderate – High
	Dzitsoni Upland	Kambe Formation	Sandy Clay	Moderately High	Lowland Rain Forest 'Palm Belt'	Very Moist	High
Coastal Uplands (Coastal Range)	Kaloleni Upland	Mariakani Formation	Sand	Low	Lowland Woodland	Moist – Very Moist	High
		Mazeras Formation	Sand/Clay	Very Low	Lowland Rain Forest 'Palm Belt'		
	Kwale Upland				Lowland Woodland & Moist Savanna	Dry – Moist	Moderate - Low
	Shimba Plateau	Mazeras Formation with remnant Magarini Sand	Sand/Clay – Sand	Very Low – Low	Lowland Rain Forest & Moist Savanna	Moist	Low - High
	Mwangea Hill				Lowland Woodland	Relatively Moist	Moderate - Low
	Rabai Upland	Bay Sediments	Sandy loam / Silty Clay	Very Low	Lowland Dry Forest & Lowland Woodland	Dry – Relatively Moist	Low
		Mariakani Formation	Sand	Moderately Low			
	Kinango Upland	Upper Maji-ya-Chumvi Beds	Sand/Clay	Very Low	Lowland Dry Forest		Relatively Low
		Intrusive Igneous	Clay	Very High	Lowland Rain Forest	Moist	Moderately High
High Coastal	Nyika Plateau	Lower Maji-ya-Chumvi Beds	Clay	Moderately High – Very Low	Acacia Thorn – Bushland	Dry	Low – Moderate
		Taru Grits – Bay Sediments	Sand loam / Silty Clay				

Table 4.1 Socio-natural environments showing simplified relationship between landform, geology, soils, fertility, vegetation, climate and human influence (data source: Boxem, H. *et. al.* 1987; Michieka, D. *et. al.* 1978).

As can be seen, most soils are relatively poor, so that it is their physical properties, notably drainage and water retention that influence the vegetation and contemporary land use. Thus it illustrates the general correlation between geology, soils, relative soil fertility, vegetation, climate and human relationships.

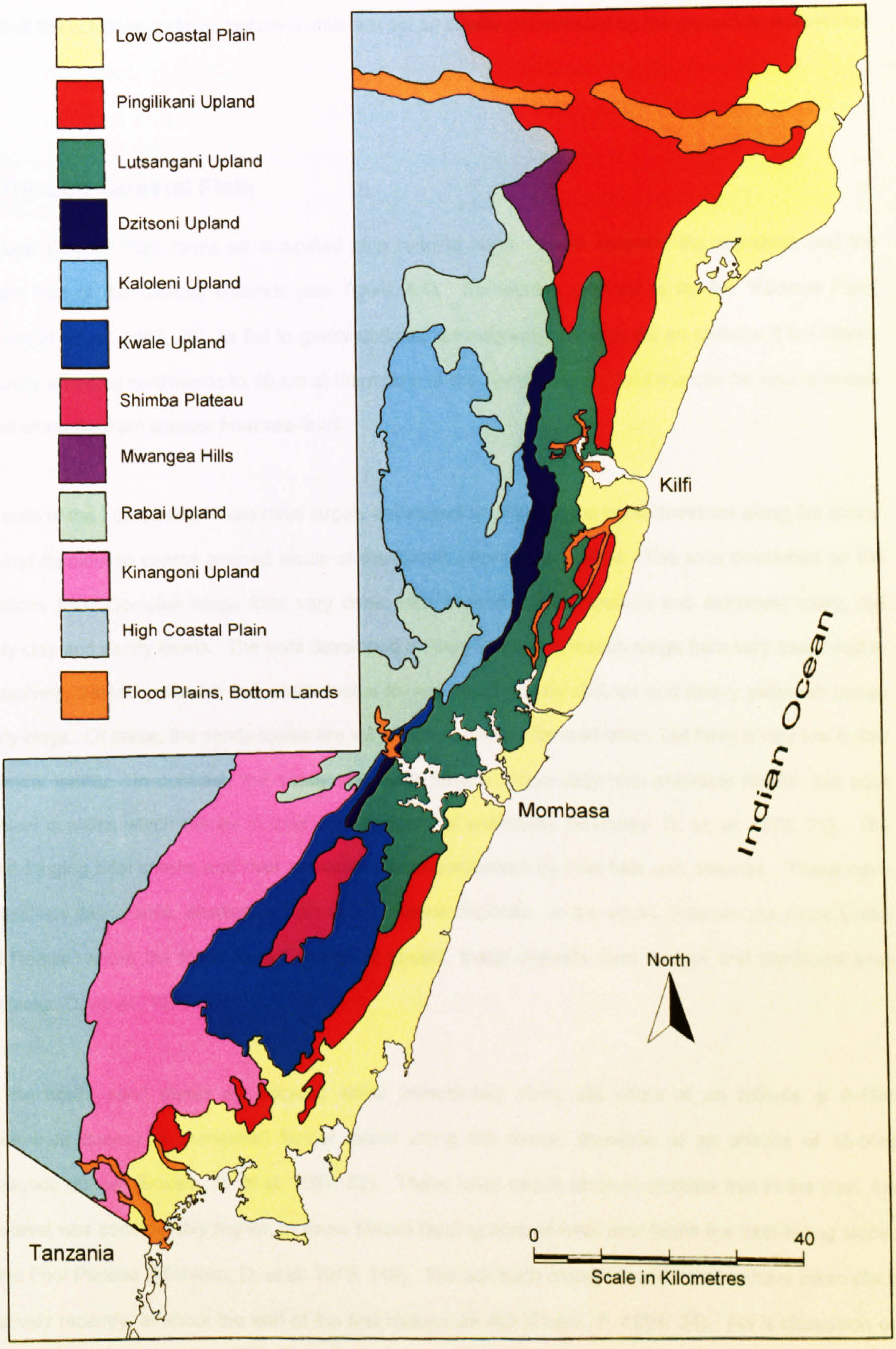

Figure 4.4 Simplified map showing socio-natural zones

These are considered in more detail within the context of each socio-natural zone below. It is important to note that the actual boundaries between units are not so clearly demarcated on the ground as represented here.

4.4 The Low Coastal Plain

The Low Coastal Plain forms an elongated strip running north - south between the sea-shore and the eastern foot of the Coastal Uplands (see figure 4.4). Sometimes referred to as the *'Kibarani Plain'* (Boxem, H. *et. al.* 1987: 26), its flat to gently undulating topography extends for an average 8 km inland, gradually widening northwards to 16 km at the mouth of the River Sabaki. This line can be approximately traced along the 75m contour from sea-level.

The soils of the Low Coastal Plain have largely developed on Pleistocene coral limestone along the shore-line and medium to coarse grained sands of the Kilindini Formation, inland. The soils developed on the limestone Reef Complex range from very deep, well drained to very shallow and extremely rocky, red sandy clay and sandy loams. The soils developed on the Kilindini Formation range from very deep, well to excessively drained yellowish red sandy loams to very deep, poorly drained and heavy yellowish brown sandy clays. Of these, the sandy loams are very easily workable for cultivation, but have a very low to low chemical fertility. In contrast, the sandy clay soils have a moderately high chemical fertility, but poor physical qualities which results in their poor agricultural workability (Michieka, D. *et. al.* 1978: 71). The areas fringing tidal creeks and river estuaries are characterised by tidal flats and swamps. These have excessively saline soils, developed from recent marine deposits. In the south, between the rivers Umba and Ramisi, where the fossil Reef Complex is absent, these deposits form a large and significant area (Michieka, D. *et. al.* 1978: 42).

To the north, sand dunes are located either immediately along the shore at an altitude of 0-15m (Kikambala dunes) or somewhat further inland along the former shoreline at an altitude of 15-50m (Makonde dunes) (Boxem, H. *et al.* 1987: 52). These fossil beach terraces indicate that in the past, the sea-level was considerably higher, in some places lapping against what now forms the east-facing slopes of the Foot Plateau (Michieka, D. *et al.* 1978: 146). The last such change is estimated to have taken place relatively recently, at about the end of the first millennium AD (Chami, F. 1994: 34). For a discussion on the implications of such recent changes in sea-level on the archaeology of early communities inhabiting the Low Coastal Plain see Åse (1987), Morner (1992) and Chami (1994; 37-38).

Originally, the Low Coastal Plain south of the River Sabaki was covered by Lowland Forest on Coral Rag (*Combretum schumanni–Cassipourea*) and Lowland Woodland (*Brachystegia–Afzelia*), with areas of Lowland Moist Savanna (*Afzelia–Anona/Panicum*) concentrated along the mouth of the River Umba and north of Mtwapa Creek, and remnant patches of Lowland Rain Forest (*Sterculia–Chlorophora/Memecylon*) extending down the slopes of the Coastal Range along the river valleys of the Ramisi and Sabaki. In the drier region north of the Sabaki, Lowland Dry Forest (*Manilkara – Diospyros*) extended as far as the Tana River (Moomaw, J. 1960: appendix 1).

Despite the low fertility of the sandy soils, few areas of natural vegetation remain, the area now being characterised by shrub and bushland with increasing amounts of arable cultivation and grazing land (Boxem, H. *et. al.* 1987: 38). Contemporary population density averages about 140 persons/km^2, but varies between 50 and 300 persons/km^2 depending on the type of farming system. These range from small to medium sized smallholdings (producing coconut, vegetables, fruit, milk, poultry, cashewnut, cowpea and sinsim); many of which have been established since the resettlement schemes of 1962, and large-scale commercial sisal and livestock estates (Waaijenberg, H. 1987: 205-206). Along the shoreline semi-natural shrub communities (*Capparis cartilaginea-Cynanchum tertrepterum*) continue to exist near the beach and on the coral rock outcrops, with mangrove forest (*Sonneratia alba-Rhizophora murnata*) existing within the tidal creeks and estuaries. As in the past, these areas continue to provide valuable timber resources and rich fishing grounds for the local inhabitants (Horton, M. 1984; Kusimba, C. 1993: 31).

4.5 The Coastal Uplands

As already noted, the Coastal Uplands can be sub-divided into an eastern Foot Plateau and western Coastal Range (see table 4.1 and figure 4.4).

4.5.1 The Foot Plateau

The Foot Plateau runs parallel to the Low Coastal Plains. In the north, this forms a transitional region to the High Coastal Plain in the west. To the south, the Foot Plateau is bounded by the Coastal Range. Three socio-natural zones, the Pingilikani, Lutsangani and Dzitsoni Uplands, have been defined:

The Pingilikani Upland

Situated in the north and eastern Coastal Upland regions, the Pingilikani Upland is formed on the unconsolidated sands of the Plio-Pleistocene Magarini formation. These sands have been mostly eroded away. In the south, this has left plateau-like remnants, running in a narrow, discontinuous band overlooking the Low Coastal Plain. In the north, this has exposed a patchwork of Jurassic shales, and restricted erosional scarps or *'Nyari'* cut into the underlying Pliocene sands of the Marafa Formation.[3] However, for the sake of descriptive summary, these are all broadly treated together in the same zone.

The major part of the Pingilikani Upland has a flat to gently undulating relief, with an altitude range of between 100-200 m. The soils are well to excessively drained, very deep, dusky red to red sandy loams. In the north, yellowish red to pale yellow sandy loams also occur. Due to their sandy topsoil, all these soils are very easy to work. However, their organic content and chemical fertility is low to very low, restricting arable productivity (Boxem, H. *et. al.* 1987: 51).

Much of this area would originally have been covered by Lowland Dry Sokoke Forest (*Cynometra–Manilkara sulcata/Croton*) (Moomaw, J. 1960: appendix 1). Despite a large block of this forest being preserved by the Arabuko–Sokoke Forest Reserve and National Park, severe degradation of this vegetation still continues. Until recently, this area would have provided a rich source for timber, medicinal plants and wild fauna. Today, overgrazed secondary shrub and bush-lands cover much of the drier northern Pingilikani Upland, though remnant Lowland Woodland (*Brachystegia–Afzelia*) is still found in the north around Marafa (Tinga, K. 1993). To the west, the Sokoke Forest changes to Lowland Dry Forest (*Manilkara–Diospyros*). Towards the south, the remnant plateaux were originally covered by communities of Lowland Moist Savanna (*Albizia–Anona/Panicum*). However, the moister climate has also attracted greater human impact, the contemporary population averaging between 50-100 persons/km². This has led to a mixed agricultural landscape of tree crops (mainly cashew nut trees and a few coconut plantations) intermixed with arable (principally maize and cassava).

The Lutsangani Upland

The Lutsangani upland encompasses a zone running north–south, between Mwangea Hill and the Shimba Plateau. It is a landscape well distinguished from the Pingilikani, Dzitsoni and Kaloleni uplands which

[3] These erosional scarps or *'Nyari'* often have a strong local ritual significance. The *'Nyari'* at Marafa was also seen to be a potentially important source of iron ore (Tinga, K. 1993).

bound its east and west sides. The topography is characterised by a rolling relief, strongly dissected by seasonal valleys, often with steep sides and narrow valley bottoms and an altitude which ranges from sea-level along Kilifi, Mtwapa, Tudor and Port Reitz creeks, to 150 m (Boxem, H. *et. al.* 1987: 25).

The area corresponds with the distribution of the Late Jurassic – Early Cretaceous shales of the Mtomkuu Formation, the higher summits and ridges of which remain covered by remnant sands of the Magarini Formation (see the Pingilikani Uplands above). The shale soils are generally well drained, moderately deep, yellowish red and reddish brown clays. The high chemical fertility of these soils has led to their intensive cultivation, most dramatically in the central parts of the region, an area appropriately labelled the 'Maize Belt' (Waaijenberg, H. 1987: 208). However, to the north and south, the soil tends to be shallower, with poorer physical properties and a greater susceptibility to erosion.

The vegetation in this area has been classified as Lowland Shale Savanna (*Manilkara–Dalbergia/Hyparrhenia*) and is entirely secondary in nature (Moomaw, J. 1960: 29). Despite, or rather, because of the intensive cultivation, the region is thinly populated, with about 50 persons/km² (Waaijenberg, H. 1987: 208). Most people who own land in this area tend to live in the neighbouring Dzitsoni Upland to escape the 'slippery' nature of the clay soils during the rains. To the south, grasslands (*Hyphaene coriacea)* predominate. Here the population density is less than 40 persons/km² (Michieka, D. *et. al.* 1978: 9), with a mixture of cattle grazing (which includes a large private ranch), coconut and some maize cultivation. To the north, the growing of crops is further hindered by the lower and less reliable rainfall and land is used extensively for grazing. The landscape is here characterised by open bush-land (Hibiscus aponeurtius), with a population density of no more than 30 persons/km^2 (Waaijenberg, H. 1987: 208-9). Along the river valleys, *Acacia polyacantha* forest occurs, as well as complex patterns of bush-shrub-grasslands and/or arable (Boxem, H. *et. al.* 1987: 39).

The Dzitsoni Upland

The Dzitsoni Upland forms a narrow elongated band running north – south between the Lutsangani and Kaloleni Uplands. Two foci are identified: the Dzitsoni Upland proper, which is concentrated north of Tudor Creek in the central area of Kilifi District, and a smaller and separate area north of the Shimba Plateau. Both areas have a gently undulating relief, with an altitude of between 100-200 m, and are formed on the limestone rocks of the mid-Jurassic Kambe Formation. The area is well known for its scattered line of rocky limestone outcrops and caves, which have formed both a shelter to past communities and are still of sacred importance to contemporary ones (Soper, R. C. 1975; Robertson, S. 1987).

The soils developed on this limestone are predominantly well drained, deep to very deep, red sandy clays. These have both a good physical structure and a moderately high chemical fertility (Boxem, H. *et. al.* 1987: 50, 117). As a result, the northern area is a densely populated zone, with 150 to 250 persons/km^2, and constitutes, along with part of the Kaloleni Upland to the west, what has been termed the 'Palm Belt' (Waaijenberg, H. 1987: 210). To the south, the population density is lower, being under 40 persons/km^2 (Michieka, D. *et. al.* 1978). In part, this is due to the remnant Lowland Woodland (*Brachystegia–Afzelia*), which remains protected in the Maluganji and Mwache Forest Reserves. In the north, smaller remnants of Lowland Rain Forest (*Sterculia–Chlorophora/Memecylon*) are still found along the hill tops (Moomaw, J. 1960: appendix 1), but the vegetation is now primarily agricultural, characteristically coconut plantations mixed with cashew, mango, citrus and banana, and some maize cassava and rice cultivation, the later more grown in the valley bottoms. Here, land is becoming increasingly scarce as population increases and many existing fields are exhausted by too long periods of cropping (Waaijenberg, H. 1987: 210). As a result, further pressure is being placed on the remnant patches of forest which have for generations been protected due to their cultural importance as Kaya (Githitho, A. pers. com. 1998). Towards the drier northern margins, arable land is increasingly interspersed with bush and grazing land.

4.5.2 The Coastal Range

The Coastal Range is situated between the Foot Plateau of the Coastal Uplands to the east, and the High Coastal Plain to the west. Six physiographic regions have been defined. These include the Kaloleni Upland, the Kwale Upland and Shimba Plateau, the Rabai Upland and Mwangea Hills, and the Kinango Upland, respectively.

The Kaloleni Upland

The Kaloleni Upland is located in the central and western parts of Kilifi District. Formed on the coarse-grained sandstone of the Late Triassic and Early Jurassic Mazeras Formation and the fine-grained sand and silt-stone of the underlying Mid-Triassic Mariakani Formation, its southern boundary tapers into a narrow band before opening into the Kwale Upland. The area is characterised by a gently undulating relief with an altitude range of between 250-300 m. However, a series of erosional hills, notably Kinangoni (352 m), Kizurini (328 m) and Kizingo (291 m) prominently rise above this landscape, which is further bounded to the east and south-west by the steeply rising Kaloleni and Mazeras escarpments.

The soils formed on the sandstone of the Mazeras Formation are seen to be concentrated in the south and east. These are mainly excessively drained, mostly very deep, white to yellowish red sands. Whilst they are easy to work, they have a low moisture storage capacity and a very low chemical fertility. However, a large area of deep, red sandy clays running in a strip alongside the Dzitsoni Upland has a somewhat better moisture storage capacity and higher organic content making this area highly susceptible to agricultural exploitation (Boxem, H. *et. al.* 1987: 50). The soils formed on the sandstone and silt-stone of the Mariakani Formation are concentrated in the drier north-west of the region. These soils are again, excessively drained, very deep, yellow and sandy, easy to work and have a low moisture storage capacity. However, their chemical fertility is slightly higher.

The contemporary vegetation pattern exhibits a very gradual boundary with that seen on the Dzitsoni Upland and constitutes the western half of the 'palm belt' referred to above. In the wetter parts, notably east of Kaloleni, the landscape would originally have been covered by Lowland Rain Forest (*Sterculia–Chlorophora/Memecylon*), the remnants of which are still found along selected hilltops (Moomaw, J. 1960: 39). Like the Dzitsoni Upland, this has been replaced with coconut plantations interspersed with citrus and cashew nut trees, and an arable mix of cultivated foods (maize, cassava and rice) and cash crops (sesame, tobacco). In the drier parts to the north and north-west of Kaloleni, coconut plantations gradually give way to extensive grazing on secondary bush and shrub-land, which, along with charcoal production, is steadily reducing the remaining original Lowland Woodland (*Brachystegia–Afzelia*).

Population around Kaloleni is about 150 to 250 persons/km^2, with a steady decrease into the dryer parts, about 50 to 100 persons/km^2. Many of the soils in this area have become exhausted by too-long periods of cropping, and erosion, increased by the degradation of the vegetation cover through overgrazing (Waaijenberg, H. 1987: 210).

The Kwale Upland and Shimba Plateau

The Kwale Upland is located in the central and northern parts of Kwale District. Formed on the coarse-grained sandstone of the Late Triassic and Early Jurassic Mazeras Formation, it is connected by a narrow north–south band to the not dissimilar southern Kaloleni Upland. The area is characterised by an undulating relief with an altitude range of between 150-250 m and overshadowed at its centre, by the Shimba Plateau, with steeply sloping scarps and a flat to gently undulating top, rising to a height of 475 m.

The soils of the Kwale Upland range from very deep, excessively drained yellowish red sands to very deep, well drained, red sandy clays underlying sandy loam top-soils. As with the Kaloleni Upland, these soils are easy to work, but have a low moisture storage capacity, a low organic content and a very low chemical fertility, hence restricting any intensive cultivation. Population density is therefore low, at between 60-80 persons/km² (Michieka, D. *et. al.* 1978: 9).

The soils of the flat Shimba Plateau are formed on remnant sands of the Plio-Pleistocene Magarani Formation (see the Pingilikani Uplands above), which is seen to overly the Mazeras sandstone (Michieka, D. *et. al.* 1978: 38). These are well drained, very deep, red to dark red sandy loams and sandy clays, easily worked, but again have a low organic content and chemical fertility. Population density in this area is higher, averaging between 100-200 persons/km² (Michieka, D. *et. al.* 1978: 9).

Both the Shimba Plateau and parts of the Kwale Upland would originally have been covered by Lowland Rain Forest (*Sterculia–Chlorophora/Memecylon*) (Moomaw, J. 1960: appendix 1). A large area of this forest is now protected by the Shimba Hills Forest Reserve and National Park. Below the plateau, and to the east, this gives way to Lowland Moist Savanna (*Albizia–Anona/Panicum*), extending down to the Low Coastal Plain. In the drier west, Lowland Woodland (*Brachystegia–Afzelia*) extends into the Kinango Upland (see below).

The Rabai Upland and Mwangea Hill

The Rabai Upland occurs both in the south-west of Kilifi District, with a very gently undulating relief, and in the central north, with an undulating to rolling relief. Both areas have an average altitude of between 150-250 m. The majority of soils are derived from unconsolidated fine sand and clay Pleistocene Bay deposits. Those in the south-west are moderately well drained to imperfectly drained, deep, brown sandy clay loams and often saline and/or sodic clays, with additional scattered 'islands' of well drained, very fine, pale brown loamy sands. In addition, a small area of clayey soils developed from the Mariakani Formation, is also to be found in this area (Boxem, H. *et. al.* 1987: 50).

In the central northern part the moderately saline and/or sodic clays occur again. However, the hill summits and ridges in this area have sandy soils derived from the sandstone of the Mazeras Formation. This is most evident at Mwangea Hill, an outcrop of Mazeras sandstone which rises above the plain to a height of 520 m and covering an area of about 35 km².

The soils formed on Bay deposits have a low chemical fertility and poor physical qualities. Any remaining agricultural potential is further worsened by the low and unreliable north-western rainfall pattern. Here, population density averages between 50-100 persons/km² (Waaijenberg, H. 1987: 210). Most people practice a shifting and fallow cultivation with livestock grazing. Both activities have seriously degraded the original Lowland Woodland (*Brachystegia–Afzelia*) and Lowland Dry Forest (*Manilkara–Diospyros*), graded from the wetter south to drier north respectively (Moomaw, J. 1960: appendix 1). The hilltops of Mwangea form a localised and moister micro-climate, and still retain a covering of lowland woodland. This area has been put forward as a proposed Forest Reserve, but until this is achieved, the present pressure for newly cleared land and timber continues to eat away at the forest margins (Robertson S. and W. Q. Luke 1993).

The Kinango Upland

The Kinango Upland forms a transitional zone between the High Coastal Plain to the west and the Kwale Upland to the east. However, its southern boundary curves eastwards, where it adjoins the Low Coastal Plain between the Umba and Ramisi rivers. The area has a gently undulating to undulating relief with an altitude which drops from 300 m in the north-west to 50 m in the south-east. Here the low altitude is broken by the prominent landmarks of Jombo (462 m), Mrima (295 m) and Kiruku (188 m) hills. Closely spaced together, these form a volcanic complex of intrusive igneous and associated rocks, the well drained, very deep, reddish clays of which have a high chemical fertility, are easily workable and have an excellent physical structure with good moisture storage capacity (Michieka, D. *et. al.* 1978: 76).

The larger part of the Kinango Uplands is, however, formed on the fine-grained sand and silt-stone of the Lower Triassic Upper Maji-ya-Chumvi Beds and Mariakani sandstone. These soils range from imperfectly drained, deep, yellowish brown sandy loams and sandy clays to well drained, shallow to very deep, brown sandy loams and sandy clays. They have a fair to low organic matter content, and moderate to very low chemical fertility. Whilst they are easy to work, they are susceptible to sealing and where their protective vegetation cover has been removed, severe sheet erosion can take place.

This variability in the soils is reflected by the natural vegetation pattern. At the interface between the Low Coastal Plain and the Kinango Upland, Lowland Moist Savanna (*Albizia–Anona/Panicum*) predominates. Along the valley of the Ramisi River, and the slopes of Jombo, Mrima and Kiruka hills, Lowland Rain Forest (*Sterculia–Chlorophora/Memecylon*) remnants are found, and now protected by the Marenji, Jombo and Mrima Forest Reserves. As we move progressively north and westwards, these wetter environments are replaced by Lowland Woodland (*Brachystegia–Afzelia*) and Lowland Dry Forest (*Manilkara–Diospyros*)

(Moomaw, J. 1960: appendix 1). Here the contemporary population density averages about 50 persons/km² (Michieka, D. *et. al.*1978: 9). Agricultural activity is mainly concentrated on the fertile soils formed on the intrusive igneous rocks of Jombo, Mrima and Kiruku Hills. Again, to the north and west, poor rainfall and unsuitable soils has restricted cultivation, the area being largely used for extensive cattle grazing.

4.6 The High Coastal Plain

The High Coastal Plain, sometimes referred to as the '*Nyika Plateau*' is situated in the extreme west of the study region, its boundary with the western Coastal Uplands is gradual and in places, difficult to delineate. The relief is flat to gently undulating, with an altitude of between 150 to 300 m. In the survey area, the soils are derived from the silt-stone and shale of the Lower Triassic Lower Maji-ya-Chumvi Beds, and in the far west, on feldspatic sandstones and carbonaceous shale of the Upper Carboniferous and Permian Taru Grits.

The soils formed on the Lower Maji-ya-Chumvi Beds are imperfectly drained, shallow, dark reddish brown to dark grey sandy clays to clay. These soils have a high organic content and chemical fertility, but due to their heavy clay texture, have poor physical properties with a saline/sodic subsoil resulting in cracking of the surface. The soils developed on the Taru Grits vary from well to imperfectly drained, deep, brown to dark grey sandy loams and clays. These have a low organic content and chemical fertility (Michieka, D. *et. al.* 1978: 77). The soil surface is often easily compacted and sealed, resulting in severe sheet erosion which is rapidly accelerated where the vegetation cover has been reduced or completely removed.

The vegetation in this area is characterised by thorny Acacia bush (*Acacia-Euphorbia*) and grassland (*Salvador persica*) (Boxem, H. *et. al.* 1987: 40). On the sandy hills, lowland dry forest (*Manilkara-Diospyros*) sometimes occurs. The poor soil quality and the small and unreliable annual rainfall has impeded the settlement of this area: population density is less than 50 persons/km² (Waaijenberg, H. 1987: 210). This area has very little agriculture (occasionally maize and cassava), but is instead extensively overgrazed by both, small-hold and large-scale commercial, livestock herds.

4.7 Human perception and symbolism: the natural environment

Local perception of the symbolic attributes within the human-modified landscape also requires some analysis. The remnant patches of natural forest scattered throughout the three main land forms, but concentrated within the Coastal upland zone, maintain and are maintained by the traditional cultural values of the local Mijikenda inhabitants (see Chapter 2). Circular clearings within the forests, referred to as Kaya, act as both defendable settlements, and as ritual and political foci for Mijikenda identity, through which the elders seek to exert control over the rapidly changing present, through their knowledge claims of, and connection (via their ancestors) to, a traditional Mijikenda past (Willis, J. 1996).

Smaller sacred groves, often situated at the foot of a spring, or more notably, in the limestone caves and rock outcrops of the Kambe Formation, and the erosional scarps or '*Nyari*' found in the sands of the Magarini Formation, all perform a similar function, though on a more localised scale. That these small pockets of natural habitation survive reflects the ritual significance of the past landscape within the present (see figure 2.3). As groups identified themselves with specific parts of the landscape, and as the pressure on these landscapes intensified, so too did a need arise for the incorporation of that landscape, or its remnants, within the cultural and social identity of its inhabitants.[4]

4.8 Contemporary populations: linguistic and ethnic identities

The contemporary populations that inhabit the study region and its immediate neighbourhood fall neatly into three linguistic groups: that is, Southern Cushitic, Eastern Cushitic and Bantu. Traditionally such linguistic divisions have then been correlated with observed cultural and socio-economic traits (Heine, B. and W. Mohlig, 1980). The resulting ethno-linguistic boundaries therefore broadly correlate with the socio-natural zones outlined above. However, as will be seen, the picture is rather more complex than first presented.

Within the study region, five ethno-linguistic units have been defined. Of these, the North East Coast Bantu Sabaki-speaking Swahili and Mijikenda are the most prominent. Scattered amongst these communities are small groups of Eastern Cushitic speaking hunter-gatherers, the Waata, Degere and

[4] Such a process is also suggested for the Buhaya region of north east Tanzania, where forest remnants were protected from over exploitation by sacred authorities, often under royal patronage (Schmidt, P. 1997:411).

Vuna, whom, it is argued, originally spoke a Southern Cushitic language (Stiles, D. 1982; Walsh, M. 1990, 1992/3).

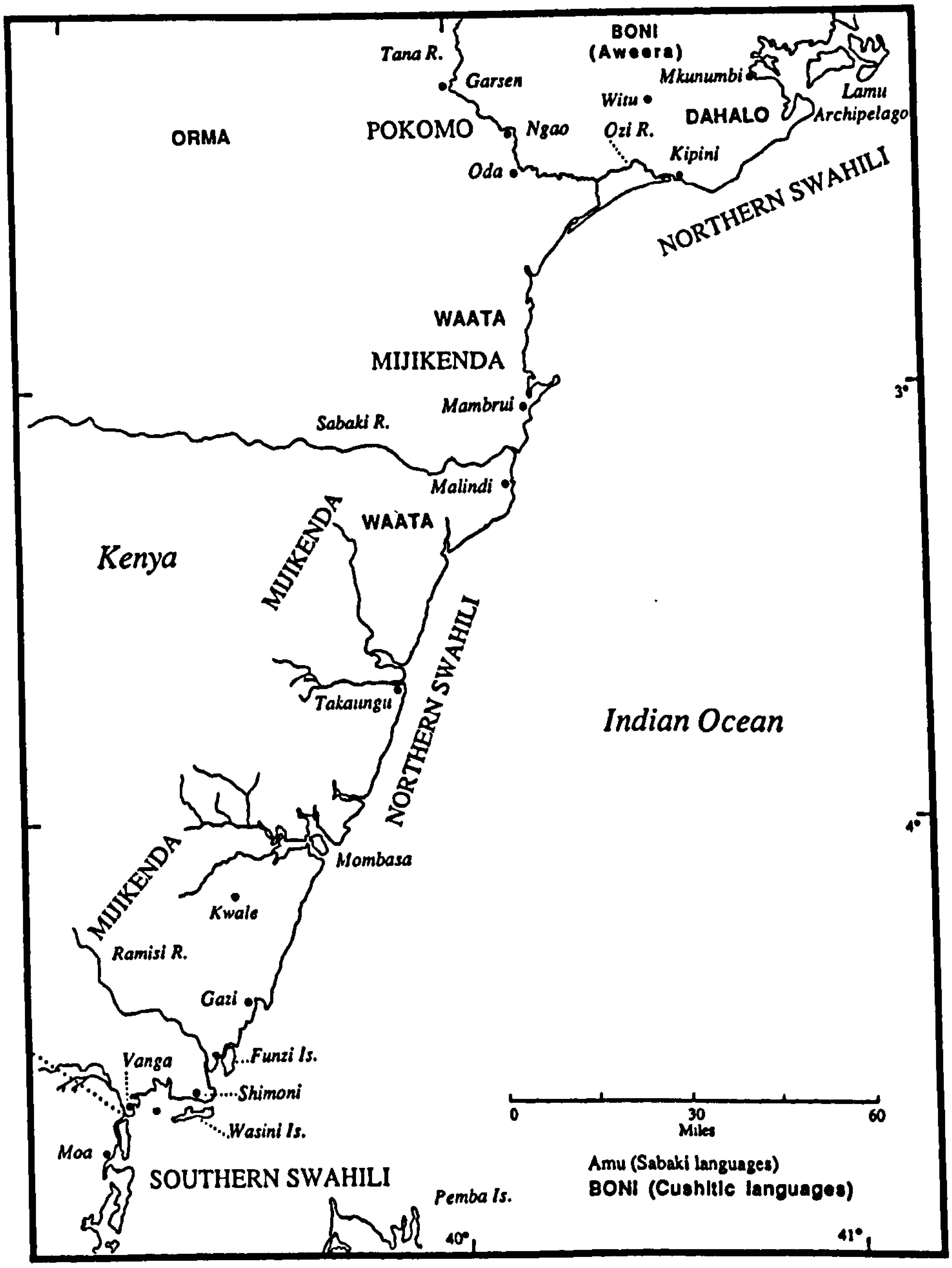

Figure 4.5 Distribution of main language groups in coastal Kenya (from Nurse, D. and T. Hinnebusch, 1993: map 3)

Outside the study region, adjacent ethno-linguistic groupings also require consideration if we are to fully understand cross-regional interactions. To the north, these include the originally Southern Cushitic speaking Dahalo (Nurse, D. 1986; Stiles, D. 1982: 167), forming a small group of hunter-gatherers to the north, inhabiting the Kipini-Witu-Mkunumbi area, north east of the Tana River delta, the Eastern Cushitic

(Aweer) speaking Boni hunter-gatherers (Stiles, D. 1982: 167), inhabiting from north east of the Tana River as far north as the Juba River in Somalia, and the Eastern Cushitic Oromo and Somali pastoralist (Grottanelli, V. 1975: 50-61; Cassanelli, L. 1982) of north Kenya and Somalia, extending southwards along the High Coastal Plain.

The Bantu speaking, farming communities, include other Sabaki speakers: the Pokomo (Prins, A. 1952: 1-31; Abungu, G. 1989), divided into Lower and Upper sections, who inhabit the lower and mid Tana River Valley, and the Elwana (Prins, A. 1952: 5-7; Abungu, G. 1989), who inhabit the upper Tana River Valley. In addition, Bantu speaking, farming populations are found in the far north, along the river valleys of the Juba and Webi Shebelle. Whilst little is yet known about these groups, it seems likely that they constitute both the remnants of a possibly pre-Somali Bantu population and later communities descended from imported Bantu-speaking slaves (Grottanelli, V. 1975: 61-68; Prins, A. 1960a: 28-31). As we have already seen in Chapter 2, to the west and south of the study region neighbouring Bantu speaking groups include the Central Kenya Bantu Thagicu speakers of south central Kenya and north east Tanzania, the Chaga/Taita Bantu speakers of the Taita and Sagala Hills Kenya, and Mt. Kilimanjaro in Tanzania, and the North East Coast Bantu speaking Pare, Seuta and Ruvu of north east and central Tanzania (Nurse, D. and T. Hinnebusch, 1993: 17-18; Spear, T. 1981b: 35-40).

The Swahili as an ethnic unit has proved difficult to define, and has been characterised as a 'polyethnic society', whose indefinite and atemporal boundaries are inter-linked through a commercial and urban culture, Islam and a shared Swahili language (Middleton, J. 1992: 2; Allen, J. 1993: 240-61). Within the study area, that is from the Sabaki River to the south Kenya-Tanzania border, the Swahili might be sub-divided into groups based on the linguistic classifiction of eight locational dialects: Mambrui/Malindi, Jomvu, Mvita, Ngare, Changamwe, Kilindini, Chifundi and Vumba (Nurse, D. and T. Hinnebusch, 1993). To the north, Swahili extend as far as Mogadishu in Somalia (including Miini, Tiku, Siu, Pate and Amu dialects), and to the south, as far as Mozambique (including Mtang'ata, Pemba, Tumbatu, Unguja, Makunduchi, Mafia, Mwani, Ngazija, Mwali, Nzuani, and Maore dialects) (Nurse, D. and T. Hinnebusch, 1993). Throughout this extensive area, Swahili are concentrated immediately within the Low Coastal Plain and off-shore islands, exploiting the rich maritime resources and the Indian Ocean trade network.

As we have already seen, the Mijikenda are equally poorly defined, with an amalgam of nine coastal hinterland groups occupying the area just north of the River Sabaki, south to the Kenya/Tanzania border. Linguistically Nurse and Hinnebusch (1993: 537) have broadly subdivided these nine Mijikenda groups by their northern and southern dialects. Using lexicostatistics, the northern group consists of the Giryama, Kauma, Chonyi, Jibana, Kambe, Ribe, Rabai and Duruma. The southern group includes the Digo, and Chwaka, originally classified as a dialect of Vumba Swahili, but now believed to be a form of Digo heavily influenced by Vumba (Möhlig, W. 1984/5; Nurse, D. and M. Walsh, 1992), and the Segeju. The Segeju do not fall within Spear's definition of Mijikenda-ness above, yet exhibit a close relationship with Digo. The Segeju are presently concentrated in south Kenya and north Tanzania, along the Low Coastal Plain and partly in the Coastal Uplands (Mckay, W. 1975: 3). Examination of the Segeju language reflects a blend of the central Kenya Bantu Thagicu languages: Kamba, Meru and Daiso, and the Sabaki Digo, and it is not yet clear in which order these languages were assimilated together (Nurse, D. 1982a: 185-96; Nurse, D. and Hinnebusch, T. 1993: 539-40). For Spear (1982: 15), the Segeju are to be seen as an originally Thagicu speaking group in the process of becoming Mijikenda. A similar argument is proposed for both the Rabai and Duruma Mijikenda sub-groups. Using both linguistic evidence, cultural traits and oral and textual historical sources, Spear (1982: 12) argues that the Rabai and Duruma do not share a common origin with the other Mijikenda, rather they were originally non-Sabaki speakers who are now well assimilated with their Mijikenda neighbours (Spear, T. 1982: 12; see Chapter 2).

Comparative analysis of the Mijikenda dialects with neighbouring languages shows a complex picture of ongoing contact between different linguistic groups. Mijikenda as a whole has loan words from central Kenya Bantu Thagicu (most probably Kamba, Meru and Daisu, see above), and neighbouring North East Coast Bantu Seuta and Chaga/Taita. Arabic has entered via borrowings from Swahili, as have words derived from both northern and southern Swahili dialects. A Southern Cushitic element is probably a result of secondary loans via neighbouring languages i.e. from Taita Cushitic via Taita (Ehret, C. and D. Nurse, 1981), Dahalo via Pokomo and Ma'a in the Usambara Mountiains, via Seuta, and the presence of Eastern Cushitic loans suggests an early, northern, pastoralist influence (Nurse, D. and T. Hinnebusch, 1993: 333).

The Eastern Cushitic speaking hunter-gatherer communities within the study area form a rather homogenous group with differentiation between the Waata, Degere and Vuna by no means clear cut. Indeed it is argued by Walsh (1992/3: 142) that Waata, Degere and Vuna identities can be seen as differentiated by their degree of assimilation from an original and separate hunter-gatherer status to that within neighbouring Mijikenda (primarily Giryama, Duruma and Digo) farming communities. The Waata are recorded as extending from the Tana River delta southwards to the Kenya -Tanzania border (Stiles, D. 1982:165; Ville, J. 1995), the Vuna are found in south east Kenya (Walsh, M. 1992/3), and the Degere (Walsh, M. 1990, 1992/3) in south-east Kenya and north-east Tanzania. All three groups speak an Oromo form of Eastern Cushitic, differentiated from one another by the degree and source of Mijikenda loans. There is also some evidence that they spoke an originally Southern Cushitic language like their northern Dahalo neighbours (Stiles, D. 1982: 172; Walsh, M. 1992/3: 142-43). It would therefore seem plausible that the Waata represent the descendants of an earlier population of Southern Cushitic speaking hunter-gatherers who were later partially assimilated by Eastern Cushitic speaking, presumably pastoral Oromo, and Bantu-Sabaki speaking Mijikenda agriculturalists. This would help explain the identity of a fourth group of northern hunter-gatherers, the Laa, recalled by Giryama oral traditions as being the original aboriginal population, later absorbed by the northern Mijikenda (Spear, T. 1978; Walsh, M. 1992/3: 143). Within the study area it is likely that these hunter-gatherer groups are remnant, perhaps originally agro-pastoral populations, of a pre-Bantu occupation.

4.9 Patterns of subsistence: agriculture, pastoralism and hunter-gathering

Evidence for past subsistence patterns primarily derives from linguistic reconstruction of the past vocabularies of ethno-linguistic groups, that is, through the identification of words associated with subsistence economies and their relative position within the chronological development of each language (Nurse, D. 1997: 380). Within the study region, only the Bantu-Sabaki languages have received adequate attention for such a reconstruction to be made (Nurse, D. 1983a). With the exception of Ehret's (1980) reconstruction of parts of Southern Cushitic, the remaining pattern has been dependent upon ethnographic observation, documentary reference and oral history. Hence we have a lot of supporting linguistic data for the past farming communities, but little regarding those subsumed under the banner of pastoralist or hunter-gathering societies.

Ehret's (1980) arguments that the Southern Cushitic populations possessed sheep, goats and cattle, and possibly cultivated sorghum suggest that the existing Southern Cushitic Dahalo have adopted a hunter-gatherer mode of production, presumably prior to the arrival of Eastern Cushitic pastoral groups. Examination of the Bantu-Sabaki languages by Nurse (1983a) suggests that from an early stage the communities were both agricultural (with knowledge of a range of agricultural techniques and tools), craft specialist (notably iron-working and pottery production), active in hunting and fishing, and had some knowledge of cattle and stock-raising (Nurse, D. 1983a: 129; Nurse, D and Hinnebusch, 1993: 306-307).

With the exception of the 1st century AD reference in the *Periplus of the Erythrean Sea* (Casson, L. 1989), written sources describing the subsistence economies of the coastal inhabitants are restricted to the late first millennium AD onwards. Casson's reading of the Greek *'oratoi'* into *'arotai'* or *'tillers of the soil'* is now in dispute. The word could quite equally have been a mistranscription of *'horatai'*, which has been interpreted to mean *'overseers'*, a term which better suits the context of the text, *'each being placed in a locality like a chief'* (Wrigley, C. 1997: 114). In a 9th century Chinese reference, Tuan Ch'eng-shih recalled pastoralist inhabitants on the northern Swahili coast, living off meat, milk and fresh blood drawn from their cattle, whilst the *'five grains'* were not eaten (Wheatley, P. 1975: 101). Similar practice was recorded by the Portuguese of the Mossegejos (commonly identified with the Segeju) living outside Malindi town in the late 16th century: *'They have large numbers of cattle, and subsist upon their blood and milk mixed together, which they eat raw, and they have no other ordinary food according to report'* (Father Monclaro, 1569; in Freeman-Grenville, G. 1962:141). However, whilst the Chinese do refer to agricultural produce (see references by Wheatley, P. 1975: 93), these pastoral elements in the economy were emphasised due to their bias towards the northern coast and Horn. Description of more southerly regions, for example *'Zangibar'*, where there is mention of *'forested hills rising tier upon tier towards the interior'*, the author, Wang Ta-yüan (1349) remarked that *'most of the soil was saline so that arable land was unproductive'* (Wheatley, P. 1975: 92). Indeed, the same author goes on to state that the inhabitants replaced grains for yams (Wheatley, P. 1975: 93).

In contrast Arabic sources report the cultivation of a wide range of agricultural produce, including sorghum, millet, yams, bananas, rice, sugar cane and fruits (Chami, F. 1994: 45; Horton, M. 1984: 229-230; Nurse, D. 1983: 131). Whilst the late 9th century AD author, al-Masudi reports that the *'Zandj'* inhabitants rode their oxen into battle, and the mid 10th century AD author, Buzurg Ibn Shariyar mentions sheep and other domestic animals, Al-Idrisi (1100-1166) categorically insists on the absence of any beast of burden or cattle, whilst other Arabic authors are totally silent about animal husbandry (Masao, F. and H. Mutoro, 1988: 610). The coastal inhabitants are also seen to be actively involved in hunting and fishing. Many Arabic sources insist that the coastal populations were fish eaters, and for some places, for example in Malindi, fishing was seen to have been the main occupation (Masao, F. and H. Mutoro, 1988: 609). Reference to hunting primarily concentrates on those animals which provided skins and ivory for export, notably elephants, with some attention given to the details of hunting techniques, particularly the use of poison (al-Mas'udi, writing in the late 9th century AD; cited Masao, F. and H. Mutoro, 1988: 611). That agricultural communities existed in the earlier first millennium AD is however suggested by the possible early introduction of Banana on the East African coast (see the on-going debate reported in Sutton, J. 1994/5). Indeed, as was seen in Chapter 3, the archaeological evidence, whilst still limited, would suggest that at least by the later first millennium AD, a pattern of mixed farming, with goat, sheep and some cattle, supplemented with a diet of fish, shell-fish, and wild mammals, existed (Horton, M. 1996; Horton, M. and N. Mudida, 1993; Chittick, N. 1974, 1984; Wright, H. 1984; Sinclair, P. 1982; Chami, F. 1994).

The ethnohistorical reconstruction of past agricultural practice by the Mijikenda (Waijenberg H. 1987: 202, 1994) would suggest a shift from hunting-gathering and shifting crop cultivation to semi-permanent crop cultivation and land scarcity, and a corresponding shift from communal rights to individual land ownership. Furthermore, a common feature of the contemporary, local subsistence land-use pattern is to combine the advantages of more than one socio-natural zone, and it would seem very plausible that this practice was also carried out in the past. Families will often hold several parcels of land between the different physiographic regions identified above, thus protecting against crop failure from one zone to the other. In addition, a system of mixed cropping is employed. Hence, on a single piece of land many crops may be found, belonging to a number of different farmers. For example, the land may belong to farmer A, who has mortgaged it to B who grows maize and cassava on it. Cashew trees have been planted by C, the coconut trees belong to D, who has mortgaged their production to E. The palms may be tapped for wine by F, and so on (Waaijenebrg, H. 1987: 218). A similar pattern emerges in the ownership and herding of livestock amongst the Giryama (Parkin, D. 1991:58).

4.10 Human and natural correlates: the social-natural environment

What stands out most from the above discussion is the great ethno-linguistic diversity evident within a relatively small, but equally diverse geographical area. Each group is positioned within its own specialist niche, providing a striking correlation between social and natural environments. It is clear that the contemporary human-modified landscape is a product of the historic and on-going interaction between human and natural elements: soil type and climate have a close correlation with the natural vegetation. The distribution of the natural vegetation types is closely correlated with the distribution of human modified vegetation. The distribution of the human-modified vegetation is directly correlated with the distribution of the human settlement pattern. The distribution of the human settlement pattern is closely correlated with the soil type and climate.

Whilst the definition of such boundaries provide a useful tool for regional synthesis, research in social anthropology has shown that there is rarely a simplistic one-to-one correlation between such representations of ethnic identity, and the full range of cultural practices and socio-economic conditions which are associated with a particular group (Jones, S. 1997: 100). It is clear that ethnic identity is not simply the result of an innate 'primordiality', that is, through a basic and innate group identity acquired at birth (Isaacs, H. 1974: 15; Stack, J. 1986), neither is ethnic identity just an 'instrument' of society, economy or environment (Jones, S. 1997: 83; Willis, J. 1993:6). Rather, ethnic identity is a product of both; the cumulative historical processes through which they have been formed, that is, through modification, adaptation and specialisation within the continuously changing socio-natural realm. As noted for the Swahili and Mijikenda above, there is no adequate singular definition of an ethnic group. The representation of discrete, self-contained, monolithic and bounded physiographic and ethno-linguistic units, whilst producing neat taxonomic fits, does not allow adequate representation of the continuous interaction between neighbouring populations, or the process of socio-natural modification. History has not evolved through unconnected regional populations: *'human history has always been characterised by interaction across profound ethnic and cultural boundaries, by the amalgamation of linguistic traits, and by the recurrent hybridisation of cultures'* (Moore, J. 1994: 937).

It is clear from the available evidence that the physiographic and ethno-linguistic units identified above are not self contained, monolithic and bounded units. The farming, Mijikenda communities of the coastal uplands interact both with the commercial and maritime Swahili of the Low Coastal Plain, the Oromo pastoralist of the High Coastal Plain, and the scattered remnant groups of hunter-gatherer populations. The examination of loan words found within the Mijikenda dialects reflects this process of interaction and acculturation, and is explicitly reflected in notions of socio-economic alliances and kinship ties between different socio-natural zones (Abungu, G. 1989: 162; Abungu, G. and H. Mutoro, 1993: 703).

Ethnographic observation of both the past and contemporary situation provides a useful insight into the socio-economic interaction that existed between different groups of agricultural, pastoral and hunter-gatherer communities. Abungu (1989: 162-169) has given an excellent account of these inter-relationships for the Tana River valley region, between agricultural Pokomo, commercial urban Swahili, pastoral Oromo and hunter-gatherer Boni, Waata and Dahalo. Hence Oromo provide the Pokomo with domestic livestock products, in return for agricultural produce, and the Pokomo provide free access to the river for the Oromo livestock. Both Pokomo and Oromo are provided with honey and other wild produce collected by hunter-gatherer groups, whilst many northern Swahili folk heroes (the most well known being Fumo Liongo) are themselves of hunter-gatherer origin, yet able to move between socio-natural units (Middleton, J. 1992: 29-33). The Pokomo language has many loan words deriving from Oromo, especially in regards to terminology for cattle, but also terms relating to societal institutions, ceremonies, and iron working (Abungu, G. 1989: 164; Nurse, D. 1986: 209). Similarly, loans from the neighbouring Southern

Cushitic Dahalo reflects the long-standing interaction between agricultural and hunter-gatherer groups (Abungu, G. 1989: 165; Nurse, D. 1986: 283).

Although hunter-gatherer communities traditionally hold a low social position in relation to their neighbouring pastoral and agricultural communities (Stiles, D. 1982: 169; Walsh, M. 1992/3: 141-144), their value within the economic network ensured close interaction was maintained. Linguistic evidence suggests that the Waata adopted an Eastern Cushitic Oromo language following the expansion of Oromo pastoralism and the construction of a patron-client relationship. In return for wild animal products and other social tributes (it is reported that they were expected to give one tusk from every elephant killed to the Oromo or Somali), the hunter-gatherers received domestic animal produce and a degree of economic and political security, as long as the pastoralists did not over exploit their dominant position (Stiles, D. 1982: 169).

Whilst pastoralist taboos against intermarriage and communal residence prevented full assimilation of hunter-gatherer communities into a pastoral life-style, no such constraint seemed to exist with the Bantu speaking Mijikenda agriculturalists. Hence hunter-gatherer communities would sell animal products in exchange for food, cloth, iron and other such products, and also look after the crops of landowners in exchange for food and land on which to cultivate their own crops (Stiles, D. 1982: 169). As such, there was a greater assimilation between hunter-gatherers and agriculturalist populations than with pastoralist ones, a process which continues to be on-going even today (Walsh, M. 1992/3: 144). Such reciprocative relations are continuously referred to in recorded Mijikenda and Waata oral traditions. It was the Laa-Waata who first showed the Giryama Mijikenda the site of their primary Kaya, and Giryama also claim that knowledge of *Acocanthera* poison, along with iron arrow-heads was given by the Laa-Waata inhabitants (Spear, T. 1978: 30). Spear (1978: 68) shows how '*a Waata would go at any time to a Giryama friend and obtain sheep, goats, arrow poison or wire. Sometime later the Waata would reciprocate by giving his Giryama friend ivory. The Giryama took the ivory to the coast and returned with cloth, beads and iron wire. Some of the wire was then given to the Waata to make arrow heads.*' Griffiths (1935: 277) illustrates a similar relationship for the Duruma Mijikenda, who after first clearing the bush for cultivation had to pay the local Degere hunter-gatherers a sheep or goat in compensation for the loss of hunting land.

The same relationships are known to have existed between interior communities and the Swahili coastal towns. The Portuguese record that the Oromo were allied to the coastal town of Pate in 1637, whilst the Somali (Marakatos) were linked with the towns of Siyu, Faza, Manda, and Lamu (Abungu, G. 1989: 167;

Strandes, J. 1961). Traditions collected from Jomvu, even suggested that the town dwellers and farmers were closely related through intermarriage (Pouwels, R. 1987: 14). In 1505 the Sheikh of Oja used friendly 'Kafirs' from the interior to help defend against the Portuguese (Kirkman, J. 1966:11), whilst the Mossegejos (commonly identified as Segeju) and the Mossegulos (believed to be the antecedent Mijikenda) both helped defend, were paid tribute, and were actively involved in the political power struggles of the coastal towns of Malindi and Mombasa respectively (Strandes, J. 1968; Freeman-Grenville, G. 1962; see Chapter 2). Such alliances, embedded through patron-client networks, have continued into the present (Willis, J. 1993, Willis, J. and S. Miers, 1997; Parkin, D. 1991). Hence the interior communities, with their respective subsistence economies, that is farming, pastoralism or hunter-gathering, formed an intrinsic network connected with the commercial towns of the coast. Much has already been written about the importance of trade between the interior communities and the coastal towns, and the coastal towns and overseas merchants (Abungu, G. 1989; Abungu, G. and H. Mutoro, 1993; Chami, F. 1994; Horton, M. 1984, 1987a, 1987b; Sutton, J. 1973). Whilst the role of interior communities within this trade network remains unresolved, it is now becoming increasingly clear that the coastal hinterland communities had an entrenched interest and active role in the overall coastal economy (Abungu, G. 1989: 168).

4.11 Conclusion

It is evident that the coast and coastal hinterland region constitutes a human-modified landscape, characterised by distinct, yet interconnected socio-natural environments, whose complexity can not be encapsulated within a singular, bounded and discrete definition. The pattern of land use and ethno-linguistic identities outlined above, constitutes an amalgam of varied and sometimes competing interests, that is social, economic, political and ideological, which have operated and evolved through the past into the present. The three zones identified: the commercial, urban, Islamic and maritime Low Coastal Plain, the agricultural, Coastal Uplands, and the dry, pastoral High Coastal Plain provide a basic distinction between the main socio-natural zones recognised. However, to view one zone in isolation from its neighbour is misrepresentative. Rather, it is clear that each exists dependent upon the others in a complex and interrelated network of social and economic ties.

Stage 2 Collection of new Data:

Survey, excavation and material analysis

Chapter 5 Archaeological survey in the coastal hinterland of Kenya, 1996 - 1997

5.1 Introduction

The previous chapter has established a regional picture of distinct, yet closely interconnected socio-natural environments in which both human and natural factors were seen to have shaped the existing landscape. The resulting framework will now be used as a guide in exploring the past distribution of human settlements and materials through time. The following chapter provides an outline of two seasons of fieldwork undertaken between January to February 1996 and December 1996 to September 1997 respectively, during which a total of 165 archaeological sites were visited, of which 116 were newly located and identified. The work has provided a more representative spatial and chronological sample of settlement history in the southern and central coastal hinterland region of Kenya than has previously been available. As well as placing the spatial and temporal patterns of site distribution within a socio-natural context, the survey also sought to incorporate local knowledge within our perception of the historical landscape. The final field season's work culminated with the excavation of five sites, each representing a different chronological phase spanning the early, middle and later iron-working, farming periods. This is reported in Chapter 6 below.

It was noted that there has in the past, been a considerable emphasis in archaeological fieldwork towards the urban sites of the Low Coastal Plain. This has been steadily corrected since the late 1980s with a growing awareness of the symbiotic role of neighbouring coastal hinterland communities in the development of an East African trade network (Abungu, G. and H. Mutoro, 1993). However, the review of previous fieldwork has reflected an element of geographical bias towards northern Kenya, along the Tana River (Abungu, G. 1989, 1998; Kiriama, H. *et al.* 1996) and in particular, within the north-east and central coastal region of Tanzania (Chami, F. 1994; Fawcett, W. and A. La Violette, 1990; Haaland, R. 1995; Kessy, E. 1997; Schmidt, P. *et al.* 1992; Thorp, C. 1992).

In contrast, the southern and central coastal hinterland region of Kenya has received a sporadic and relatively poor archaeological coverage. Whilst Soper (1966, 1967a) had carried out a rapid, non-systematic survey of Kilifi and Kwale districts, Collett's (1985) more refined stratified sampling strategy along the Sabaki Valley was described by the author as '*unrewarding*' and given only provisional treatment.

Elsewhere, attention has been focused on a small sample of sites, with little or no associated systematic survey. Mutoro (1987) for example, had specifically directed his archaeological investigations towards the historic Mijikenda Kaya settlements, whilst Omi (1991) and his team focused their attention towards the multi-period Stone Age site of Mtongwe and its immediate environs. The only explicit attempt to provide a regional coverage by Tinga (1993), was severely restricted in time, and area to a reconnaissance study of the hinterland of Malindi.

In part, this lack of detail can be explained by the too-long embedded assumption that the southern and central coastal hinterland was largely unoccupied until the arrival of the Mijikenda from Shungwaya, around the 16th century AD; and until the 19th Century AD, was largely confined to the protective shelter of the Kaya (Spear, T. 1978). Despite the identification of c. 3rd century AD early iron-working, farming Kwale Ware sites on the hill tops of the Shimba Plateau (Soper, R. 1967a), there was a failure to find firm evidence for any comparable settlement north of Mombasa. Similarly, despite the occasional occurrence of TT/TIW ceramics attributable to the 9th-10th centuries AD on sites located in the coastal hinterland (Soper, R. 1966; Collett, D. 1985; Mutoro, H. 1987; Tinga, K. 1993), there was a corresponding failure to identify sites which could be seen to bridge the chronological gap between the 4th and 8th centuries AD. Thus accepted opinion continued to argue that since the apparent southward emigration of the Kwale Ware using iron-working, farming Bantu speakers in the early 4th century AD, and until the late arrival of the Mijikenda in the 16th century AD, the coastal hinterland had been virtually empty of permanent or long-term settlement.

However, as was seen in Chapters 2 and 3 such a stance requires testing in the light of two important developments in coastal hinterland history. Firstly it was seen that the coherence underlying Mijikenda historiography has been unable to withstand both Walsh's (1992) review of the actual evidence available for a justifiable historical interpretation of Mijikenda origins, and Willis' (1993) instrumentalist view of Mijikenda historical identity. Secondly, archaeologically, Chami's (1994) assertion that TT/TIW ceramics had in fact evolved from the earlier Kwale Ware was seen, at least in northern Tanzania, to fill the existing lacuna between the 4th and 8th centuries AD. Both developments were thus seen to reflect the need for a more fully representative spatial and chronological picture of the past pattern of human settlement in the coastal hinterland of Kenya.

Archaeological survey in Africa has in recent years seen a revitalised and updated field methodology (for example see Bower, J. 1986; Maclean, M. 1996; Pwiti, G. 1996; Segobye, A. 1994; Sinclair, P. 1987). In general great emphasis has been placed on exploring the regional context of human interaction within the associated environmental situation. In Chapter 4, a cautionary note was made against adopting the deterministic view that environments were simply there to be exploited as economic resources. In response, an alternative approach to landscape archaeology was considered in which, following McGlade (1995), the human and natural elements are seen to affect one another equally. Human settlement did change the environment, and these changes inevitably led to adaptation within the human settlement pattern and social formation. Hence, rather than simply passively adding further dots to our existing site distribution map, we instead need to be aware of each sites' situation within the socio-natural environment. It is this interplay between material culture and the socio-natural environment that we are most concerned with here.

Previous work by Collett (1985) had suggested that the location of archaeological sites were seen to change through time as communities adapted to, and learned to exploit differing environments. Briefly summarised, he suggested that early iron-working communities settling in the Eastern Highlands of Kenya initially occupied the forested, wet highland areas which were most susceptible to agriculture. However, by the time of the later iron-working, farming communities, this settlement was seen to have expanded into the drier, lowland regions, originally occupied by Cushitic speaking agro-pastoralists. Similar patterns have been recorded in the Interlacustrine area (Maclean, M, 1994/5,1996) and it has been suggested that these changes were the result of population expansion, encouraged by the expanding knowledge of iron technology, fuelled by the assimilation of new agricultural crops and domestic livestock more suited to savanna environments (Schoenbrun, D. 1993; Ehret, C. 1998). The same trends might be expected in the coast and coastal hinterland region of Kenya, where the known early iron-working sites located on the Shimba Plateau can be contrasted with the later expansion of settlement into lower lying areas of the Foot Plateau, the drier, western margin of the Coastal Range, and the Low Coastal Plain itself (Ehret, C. 1998).

5.2 Survey design

Much has been written on the benefits of adopting one or another alternative survey strategy (see for example Ammerman, A. 1981; Cherry, J. and S. Shennan, 1978; Dunnell, R. and W. Dancey, 1985; Macready, S. and F. Thompson, 1985; Plog, F. *et al.* 1978; Schiffer, M. *et al.* 1978; Shennan, S. 1985). In the end, it is clear that the final choice should be dependent upon the research questions being asked; balanced with a need for reliable and representative results obtainable within the logistical constraints set by time and resource availability.

For this survey, three broad objectives were identified:

- to locate and identify a representative sample of new archaeological sites in the coastal hinterland of Kenya
- to explore the distribution of settlements from different periods within the context of the socio-natural environment
- to incorporate local knowledge of the historical landscape within these changing temporal and spatial patterns

5.2.1 Location of survey regions

In an area such as the coastal hinterland of Kenya where the archaeological landscape might in large be termed *terra incognito*, the adoption of an extensive, exploratory survey might well have been justified. It is commonly argued that to fully understand long-term settlement history, fieldwork must be carried out in as wide an area as possible to reflect changes in settlement patterning within and between identified regions (Fish, S. and S. Lowalewski, 1990). This is difficult for a region some 6,200 km² in area (Boxem, H. *et al.* 1987: 1; Michieka, D. *et al.* 1978: 7), and would necessitate both a costly and long-term survey project beyond the limits of most research designs. Thus it was immediately clear that the survey would require either a partial coverage, involving the adoption of some form of sampling strategy, or an alternative compromise in the form of a reduction of the overall survey intensity.

The restriction of our survey to the confines of a single survey region proved to be unsuitable in an area where numerous socio-natural environments are seen to exist (see Chapter 4). If survey were to be concentrated within a single area, then we would be unable to explore the full variability in settlement history between the full range of socio-natural environments available. As Cherry *et al.* (1991: 14) argue, '*an area ideal for one period may not be suitable for others because the size and complexity of cultural systems in an area are most unlikely to remain constant over time.*' As a result, the survey sought to investigate a number of sample survey regions, which would then provide as representative a picture as possible, of the changing patterns of settlement location through time.

Seven survey regions were identified (see figure 5.1), forming a total land area of 744 km² (i.e. about 12% of the total area covered by Kilifi and Kwale Districts).

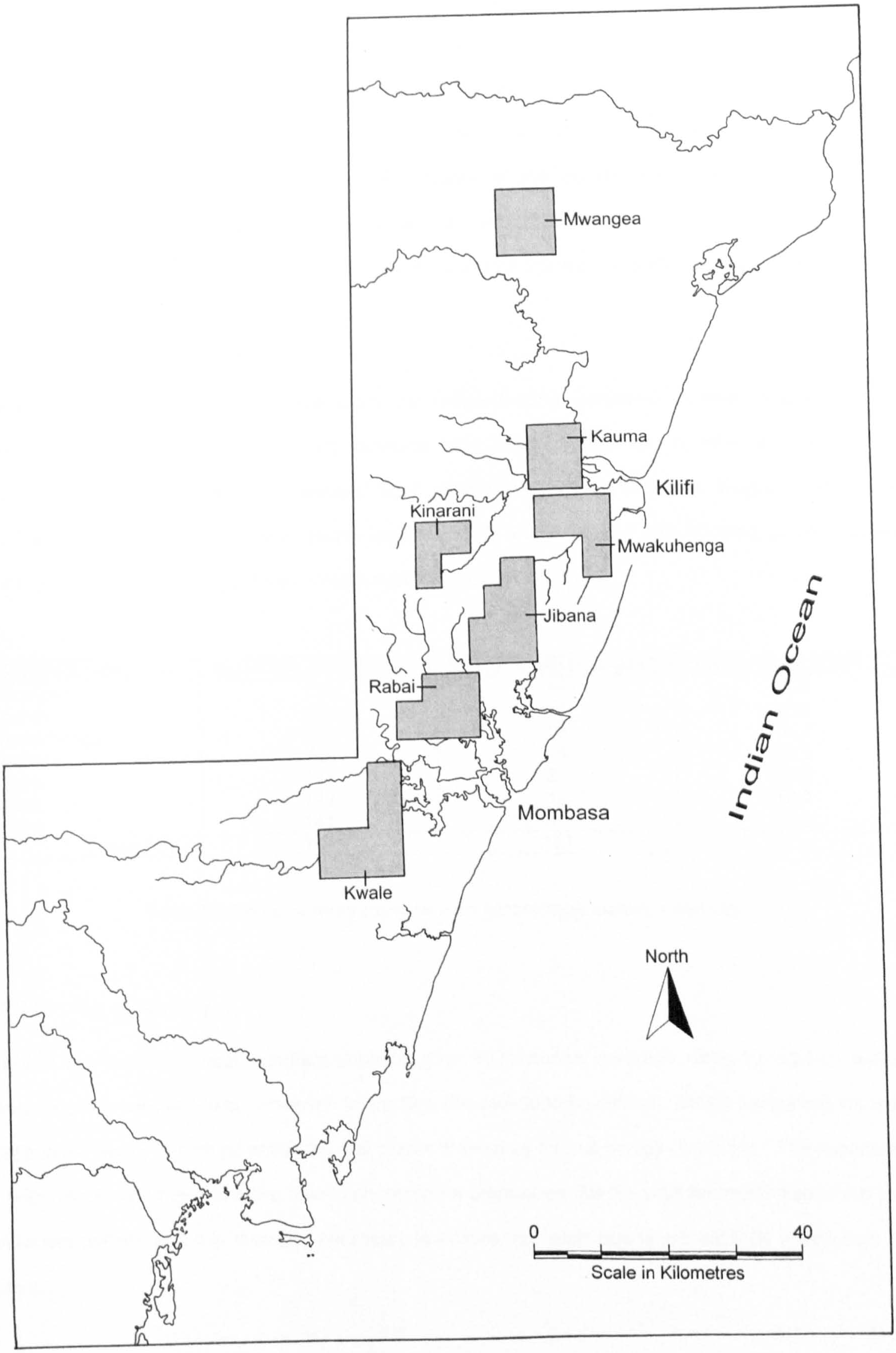

Figure 5.1 Location of survey regions in Kilifi and Kwale Districts, Kenya

The location of each survey region was based on a subjective decision reached through the careful consideration of a number of hierarchical criteria. Emphasis was initially placed on ensuring that the type and extent of individual socio-natural environments included would provide a representative sample of the landscape variability. Secondly, the location, cultural identification and density of already known archaeological sites were used as a provisional indication of past human activity. However, by far the greatest influence derived from the logistical decisions surrounding transportation and accessibility into projected survey regions, the location and security of campsites and most importantly, the good-will of local landowners.

It was decided that each survey region would be sampled using quadrants, located using a stratified sampling procedure so as to reduce any locational bias in survey area and to cover as much of the observed variability in landforms as possible (Plog, F. *et al.* 1978; Pwiti, G. 1996: 44). Regular quadrants of 1 km² were used in each of the seven survey regions. In all, a total 121 km² was covered, giving a survey intensity of 16.7% for the total survey universe available (see table 5.1).

Survey Region	Total Area (km²)	No. of Quadrants (km²)	Survey Intensity (%)
Mwangea	120	14	11.7
Kauma	80	14	17.5
Mwakuhenga	90	15	16.7
Kinarani	56	18	32.1
Jibana	134	27	20.2
Rabai	123	15	12.2
Kwale	141	18	12.8
Grand Total	**744**	**121**	

Table 5.1 List of survey regions with percentage survey intensity

5.2.2 Survey reliability

Initially it was hoped that each quadrant would be given 100% survey coverage, using 10 regularly walked transects at intervals of 100 m. However, in practise, this proved to be difficult. During the survey, we were continuously aware of both potential and real biases created by difficult survey conditions. The importance of both reliable and representative data is an important prerequisite for the valid reconstruction of the past settlement pattern, and it is therefore necessary to ensure that such biases are explicitly stated from the outset.

Firstly, the size of the survey team was relatively modest, ranging between a minimum of three and six persons at any one time, walking in approximate intervals of 20m distance apart. At such a level, field walking was not able to provide total coverage, nor was it able to guarantee that the smallest concentrations of materials were not overlooked.

Secondly, ground visibility was found to be widely variable according to the different vegetation covers present, and the weather conditions experienced. Due to the field schedule, much of the survey was undertaken during the dry season (December to April). Whilst this had the advantage of a reduced vegetation cover, its benefits were reduced by the dry and often dusty surface conditions. However, visibility was notably better at the beginning of the long rains (April to May), when the vegetation had not yet began to flourish, but where the first rainfall was seen to have washed away the dry dust covering surface pottery and other materials. In general, most sites were identified where the ground cover had either been cleared for cultivation, where road or track ways had caused erosion exposing artefacts, or where local inhabitants had some previous knowledge of a sites location.

Thirdly, the Coastal Upland in many areas is intensively settled. As a result good agricultural land is at a premium and disputes over land rights are unfortunately common (Ng'weno, B. 1995). This is amplified by fears that foreign investors are seeking land for tourism development and mineral extraction. Thus, when a foreign researcher expresses an interest in walking, recording and sometimes collecting samples from someone's land, it is often initially received with suspicion.

Such fears were in part countered through the organisation of informal meetings with local Kaya elders and Government Chiefs, and through the introduction and support offered by the staff of the Coastal Forest Conservation Unit. Here opportunity was given to explain the objectives of the field research, and to make arrangements for access to the selected regions. This involvement of local people and the formal collection of local knowledge in many ways proved to be of mixed benefit. Often elders were keen to give an account of local traditions regarding the Mijikenda migration from Shungwaya and their settlement into their respective Kaya. In many cases, this also involved numerous visits to sites of local traditional significance.

However, whilst both productive and politic, this approach ultimately hindered our attempts to provide a systematic coverage of the respective quadrants. Hence, our attempt to maintain systematic transects was eventually all but abandoned in favour of a more judgmental coverage of each survey quadrant. Furthermore, as we proceeded between existing villages and their associated fields we continuously had to make new introductions and explanation, considerably slowing down the rate at which work could proceed.

Such problems are seen to be a common feature of field survey in sub-Saharan Africa (Bower, J., 1986; Maclean, M. 1996: 71-73; Robertshaw, P. 1994: 112-113; Segobye, A. 1994: 124) and will often lead to the adoption of a more extensive '*ad hoc*' survey procedure, commonly directed towards areas with reasonable surface visibility and easy access. However, in some instances this might well lead to an undue bias in the survey's regional representivity.

It is possible to evaluate the influence of such bias by examining the final area actually surveyed, and comparing this with the proportion of the different socio-natural zones present within the originally defined survey universe (Maclean, M. 1996: 64). As was noted above, the location of each survey region was greatly influenced by logistical requirements. Of the socio-natural zones defined in Chapter 4, the Kinango Upland was therefore not included in the final survey universe. Furthermore, 56% of the final survey universe was seen to be concentrated in just two socio-natural zones, the Lutsangani Upland of the Foot Plateau and the Kaloleni Upland of the Coastal Range. This is fairly represented by the proportion of socio-natural zones actually included in the surveyed area, indicating that the surveyed area gives a valid sample of the total selected survey universe. Only one socio-natural zone, the Nyika Plateau or High Coastal Plain was not represented in the actual survey area explored (see table 5.2 below). A more detailed comparison between the survey universe and representivity of the actual surveyed area is given for each survey region below.

Physiography	**Socio-Natural Zone**	**% Total Survey Universe**	**% Total Surveyed Area**
Low Coastal Plain	Kibarani Plain	6	6
Coastal Uplands (Foot Plateau)	Pingilikani Upland	3	3
	Lutsangani Upland	33	26
	Dzitsoni Upland	8	6
Coastal Uplands (Coastal Range)	Kaloleni Upland	23	31
	Kwale Upland	5	4
	Shimba Plateau	3	6
	Mwangea Hill	8	13
	Rabai Upland	8	5
	Kinango Upland	0	0
High Coastal Plain	Nyika Plateau	3	0
	Total (%)	**100**	**100**

Table 5.2 List of socio-natural zones with percentage area included in the survey universe and percentage area included in the final surveyed area

5.2.3 Site definition

The problem of survey intensity and regional representivity is compounded by the uncertainty surrounding the definition of what constitutes an archaeological site. The small number of known sites already identified in the research area provided a rough idea of the probable range of materials to be encountered. These included both the lithic artefacts of the early, middle and later so-called Stone Age periods, the Wavy-line pottery of so-called pastoralist communities concentrated north of the Sabaki River, Kwale Ware pottery attributed to the early iron-working, farming communities concentrated on the Shimba Plateau, and the more widely scattered localities with TT/TIW and plain ceramics attributable to the middle and later iron-working, farming periods respectively (see Appendix B). However, there is often considerable variation in the total area and density of materials which are seen to constitute a locality's designation as a site and it was soon realised that in previous surveys this had not always been made explicit.

In general, archaeological materials are seen to be spatially continuous over most landscapes which have experienced human activity of one sort or another. Hence archaeological data do not come in neat, bounded packages, but rather should be seen to be distributed across the landscape with a variable density, peaking in intensity at those places called sites (Cherry, J. *et al.* 1991: 21; Dunnell, R. and W. Dancey, 1983: 272; Foley, R. 1981; Shennan, S. 1985: 8-9; Thomas, D. 1975). However, the point at which such peaks in density are to be viewed as a site is ultimately dependent upon a knowledge of the overall variability in artefact density for the region as a whole. At present such data is not yet available and it is difficult to determine whether observed surface materials should be seen to represent a settlement area or whether they simply reflected areas of limited activity or background scatters. In the field, it was soon realised that background density of off-site material was very low and easily recognisable, consisting mainly of undecorated sherds of modern pottery.

As a result, all changes from this background norm were recorded, with each occurrence being differentiated according to the types of materials occurring and the changes in surface density observed over any given area. This gave a crude definition of a site as anywhere where the pottery density exceeded over 10 diagnostic sherds per 20 m^2, or in the case of aceramic stone-tool sites, where a minimum of 2 artefacts per 20 m^2 were observed. Once a concentration of materials had been noted, the whole survey team would conduct a more detailed coverage of the immediate area. Site boundaries were determined to be where the surface density returned to the background norm. In areas where there were several observed clusters of higher density surface materials, individual concentrations were not allocated as separate sites unless there was a minimum of 50m distance between sites where no diagnostic materials of the same period were identified. However, site boundaries were often restricted by the limits of surface visibility, particularly in the case of the edges of cultivated fields and eroded track ways. As a result, site areas are estimated from the total observed area only and in some cases this might well obscure the true site size. Figure 5.2 shows the range of all available site sizes from the seven survey regions. Size estimates were possible for 133 of the total 165 sites identified.

The range of site sizes, from 7.56 ha to 0.01 ha indicates that the survey intensity was sufficient to identify a representative sample of site types. Furthermore, 81% of all sites for which a size estimate was possible are 1.0 ha or less in area.

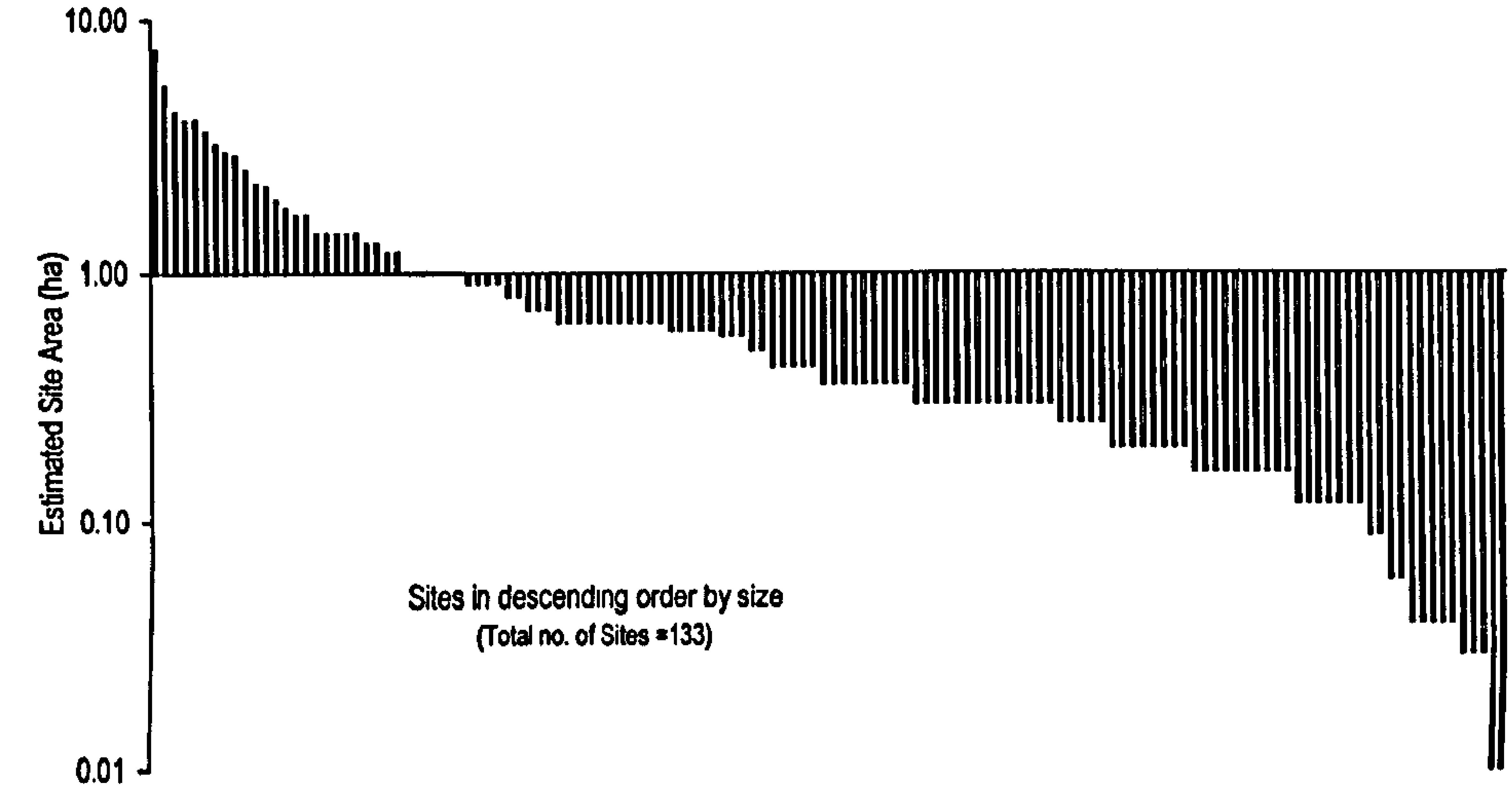

Figure 5.2 The range of estimated site sizes from all seven survey regions

Each site was recorded using a standard format, modified from the National Museums of Kenya National Survey and Archaeological Site Inventory (see figure 5.3). A hand-held GPS (Global Positioning System) was used to locate each site on a 1:50,000 map series and notes were taken relating to the socio-natural situation of each site (landform, soils, vegetation), it's archaeological importance (type and quantity of observed surface materials, size, function, and suggested period of activity) and other information on local site knowledge, cultural significance and potential threats to site preservation.

Site Name:	Functional Type:
SASES No:	Period:
District:	Material Observed:
Province:	Estimated Area:
Map Sheet:	Surface Density:
Coordinates:	Preservation:
Landowner and Address:	Materials Collected:
Position of Site and Surroundings:	Location of Collection:
Socio-Natural Zone:	Previous References:
Land Form:	Additional Information:
Soil Type:	Oral Traditions / Cultural Significance of Site:
Surface Vegetation:	Site Integrity and Potential Threats:
Elevation:	Recorded by:
Approach to Site:	Date:

Figure 5.3 Simplified site recording format

5.2.4 Surface collection

Surface collection was restricted to sites with particularly significant diagnostic materials. Two distinct strategies were used. Firstly, a 'grab sample' was made of materials seen to be of diagnostic interest. This was carried out by one team member who would walk back and forth across the whole site, until a reliable sample was felt to have been made. Such samples offered no quantitative value but provided a clear idea of the complete range of observed diagnostic materials present on each site. Finds collected in this way included diagnostic pottery sherds of differing dates, beads, and metal work. A note was made of all other materials present, including bone, daub fragments, iron slag and tuyeres.

The second strategy involved systematic 'total collection' using a site grid measured at intervals of 20m. Collection was made in each $20m^2$ by an individual team member. All materials were recorded, with non-diagnostic pottery (see Chapter 7) and daub being measured and weighed before being replaced back within their respective grids. A distribution map of surface materials was then plotted for each site, prior to excavation (see Chapter 6).

Of the 165 sites identified within the survey area, only 47 (29%) sites had any form of surface collection carried out on them. Of these, 42 were collected as 'grab samples' and 5 were given 'total collection'. All materials retained for further analysis are stored in Fort Jesus Museum, Mombasa.

However, not every site had evidence of diagnostic surface material. Such cases were commonly identified through local oral traditions surrounding the cultural significance of a locality. These included the sites of Kaya, which are seen to have been large-scale historic settlements with a ritual focus, to which access was not always possible either due to the heavy forest or in some cases cultural prohibitions; and sacred groves, which are seen to be small-scale, contemporary ritual foci with no visible evidence for past occupation activity. When a locality was seen to have been of important local cultural significance, the site was recorded as such, even if no archaeological materials were immediately forthcoming. These are marked as archaeologically 'Unknown' in the individual site records (see Appendix A).

5.3 Survey results

A general description of the survey results for each survey region is outlined below (sections 5.3.1 to 5.3.7). Individual site details are described in Appendix A.1 to A.7. Note that the data from this survey, whilst providing the first systematic coverage of the southern coastal hinterland region of Kenya, is by no means complete, and interpretation of the spatial and temporal patterns observed can at this stage only be made at a provisional level.

5.3.1 Mwangea Hill (Map Sheets 192/1, 192/3)

Mwangea Hill is situated 50 kms west of Malindi, and 12 kms south of the Sabaki River. Due to its distinctive physiography this area has been designated as a separate socio-natural zone situated between the High Coastal Plain to the north-west, the Rabai Upland to the south-west, and the Pingilikani Upland to the north and south-east (see Chapter 4). The hill, composed of Mazeras sandstone, has two summits. The higher summit, Mwangea, at 521 m, forms the highest point in the Coastal Uplands of Kenya, and is separated by a narrow, steeply sided valley from Mwahera, at 419 m, to the south. Both summits form relatively gently sloping plateaux, and in places are still covered by remnant lowland woodland (vegetation zone III).

Mwangea Hill is of particular cultural significance for most Mijikenda, and comparisons have been drawn between this settled hilltop and the better known Kaya settlements to the south (Robertson, S. and W. Luke, 1993). Traditionally, the hill marks the first resting-place for those Mijikenda communities who migrated southwards from Shungwaya. According to one of Spear's Giryama informants:

> '*When they moved to Mwangea the Chonyi, Jibana, Kambe and Ribe settled together on the smaller hilltop, while the Giryama settled on the bigger one... They settled on top of the mountain and made their fields on the slope.*' (Spear, T. 1982: 65).

In contrast, present day Giryama inhabitants recall that the first settlers lived not on the hilltop itself, but rather settled in the surrounding vicinity - for example at Kiswani to the west, Makobeni to the north-east, and Bomani to the south-west, with only small-scale cultivation of the lower hill slopes.[1] Wherever this early settlement is to be located, all traditions agree that they were very short-lived, and Mwangea was not reoccupied until the well documented northwards expansion of Giryama communities in the later 19th

[1] Interview with Mzee John Kazumbu (Giryama), Mwangea Area, 5th January, 1996; Mzee Mwambire (Giryama), Mwangea Area, 5th January, 1996; Mzee Ruwa Kilumo (Giryama), Kisiwani Area, 6th January, 1996; Mzee Ndegwa Kandu (Duruma), Kisiwani Area, 6th January, 1996.

century AD (Brantley, C. 1981: 28). Despite Mwangea's cultural importance, the relatively poor soils, and the successive attempts by government to ban all settlement and cultivation on the hill slopes, the population living on Mwangea Hill has continued to grow. This has resulted in the deforestation of a large area of woodland, causing soil erosion of the hill slopes and the debilitation of the hill as a natural water catchment which would once have provided an essential resource to early settlers (Robertson, S. and W. Luke, 1993).

The survey region encapsulates a 120 km^2 area, covering both Mwangea and Mwahera hills and the immediate surrounding flat plains. A total area of 14 km^2 was surveyed, giving a survey intensity of 11.7 % (see table 5.1 above). Most of the surveyed area was concentrated on the hill tops and slopes of Mwangea and Mwahera hills (73%), with a small area of survey undertaken in the foot slope and plains immediately below (21%), extending southwards into the Rabai Uplands (6%). Unfortunately, we were unable to establish sample areas within the Pingilikani Upland and High Coastal Plain, despite their inclusion within the boundary of the survey region. The percentage distribution of socio-natural zones and soil types for the total survey region and actual surveyed area are given in table 5.3 below.

Socio-Natural Zone	% Survey Region	% Actual Survey	Soil Type	Land Form	Vegetation	Kwale	LTT/TIW – Plain	Plain	Unknown	Total
Mwangea Hill	30	73	US	HS	III	1		9		10
				HT	III			1		1
				V	III				1	1
	23	21	HX2	HS	III		1	4		5
Rabai Upland	25	6	UO	F	II			1		1
Pingilikani Upland	3	0	UE1	F	III					
High Coastal Plain	19	0	P10	F	III					
Total	100	100	NA	NA	NA	1	1	15	1	18

Land Form Key: HS = Hill slope, HT = Hill top, V = Valley, F = Flats, NA = Not applicable

Table 5.3 Mwangea Hill survey results

Previous archaeological fieldwork in the Mwangea Hill survey region is minimal. A brief visit to the area had been made by Soper in 1966, during which he identified a total of 3 sites. These include a small rock-shelter site (HfJw2), and pottery scatter (HfJw3), both situated on the sandy soils (US) of Mwahera's west-facing slope, and a second pottery scatter (HfJw20) situated on the flat, low-lying Bay deposits (UO) of the Rabai Upland, below. However, for all 3 sites, the only diagnostic materials recorded are sherds of post-1500 AD plain ware pottery, for which Soper associated a likely late 19^{th} and early 20^{th} century date (Soper, R. 1966).

The 1996/7 survey identified a further 15 sites, increasing the total number of known sites to 18. Of these, 12 sites had post-1500 plain ware ceramics, 1 site had both plain ware and late TT/TIW ceramics, and most significant, 1 site had Kwale Ware ceramics. In addition, a second rock-shelter was located at the head of the valley dissecting Mwangea and Mwahera hills. This site is an important focus for contemporary rain making and fertility rituals. However no surface materials were observed, and it is not known whether the site is of archaeological significance. A list of the main typological and locational attributes of all the sites are summarised in table 5.3 above; and detailed site descriptions are given in Appendix A.1. Figure 5.4 shows the distribution of sites in relation to survey quadrants, soil types and local topography.

Although the existing sample of sites is somewhat limited, the survey evidence would point towards an early and small-scale occupation of the west-facing slopes of Mwangea, sometime during the 1st to 6th centuries AD. This is a notable occurrence, as it is the most northerly extension of Kwale Ware so far confirmed in the coast region of East Africa. However, despite the benefits of a localised, moist micro-climate, and a rich woodland resource, Mwangea Hill does not seem to have been occupied again until the later second millennium AD. The single occurrence of a late TT/TIW settlement below Mwahera would suggest that this occupation was initially restricted to the surrounding plains and lower foot slopes. Only by the later second millennium AD is there any firm evidence for the intensive settlement of the upper slopes and summits of Mwangea and Mwahera hills, and it would seem very likely that these settlements, marked by the presence of plain ware ceramics, were the result of the documented northwards expansion by Giryama communities in the late 19th and early 20th centuries.

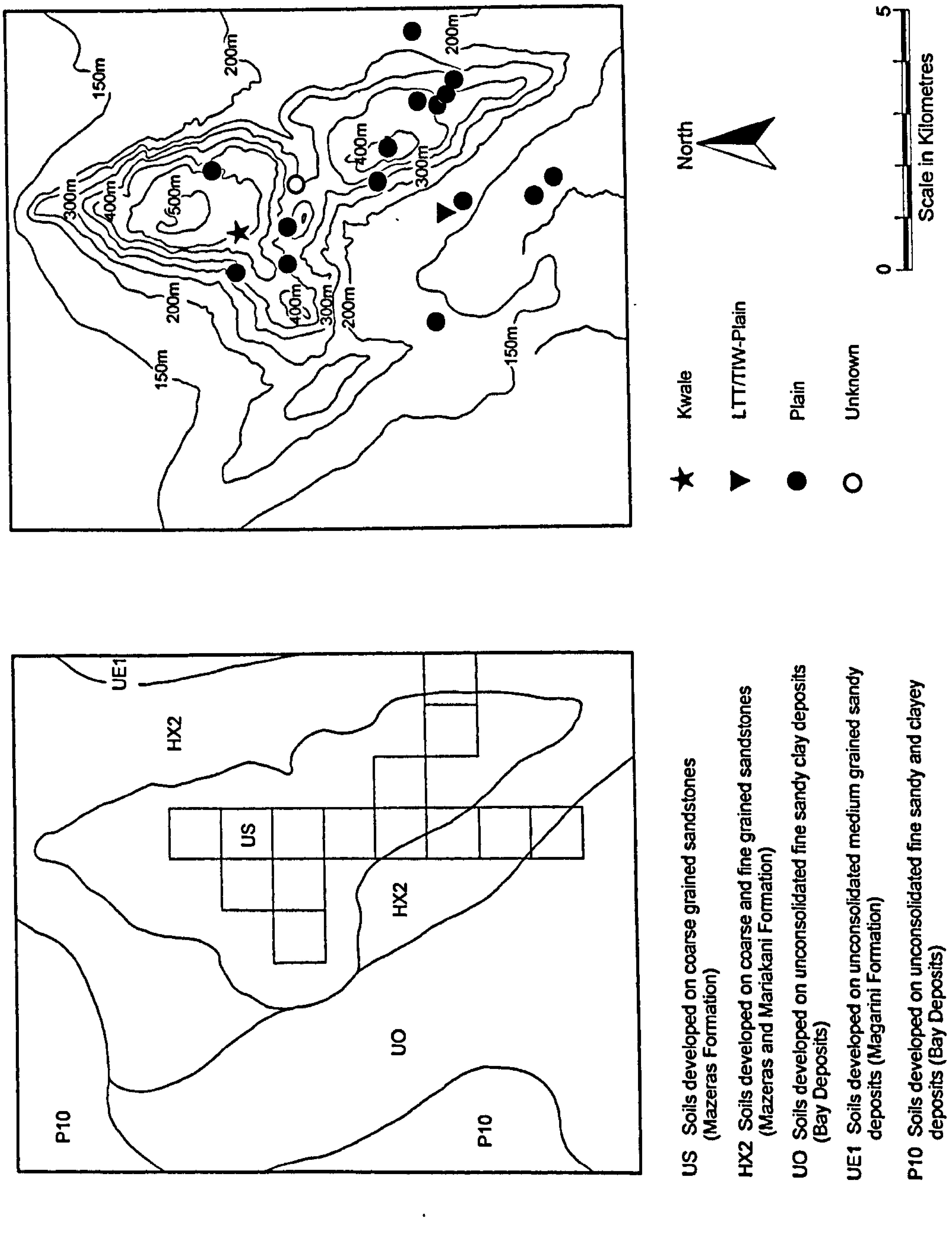

Figure 5.4 Site distribution and soil types within the Mwangea survey region

5.3.2 Kauma (Map Sheets 198/1, 198/2)

The Kauma survey region is located some 25 km south of Mwangea Hill in an area north and east of Jaribuni trade centre. The area is characterised by a landscape of valley bottoms and ridge tops cut by a network of tributary streams of the Rare and Ndzovuni rivers, which flow into Kilifi Creek to the east. The survey region encapsulates an area 80 km². This is largely situated within the Lutsangani Upland, but also includes part of the Dzitsoni Upland to the west, and the Low Coastal Plain to the east (see Chapter 4). A total area of 14 km² was sampled, giving a survey intensity of 17.5% (see table 5.1 above). This was specifically concentrated in the Lutsangani Upland (96%), although the western boundaries of two survey quadrants included a small area of the Dzitsoni Upland (4%) (see table 5.4 below).

Socio-Natural Zone	% Survey Region	% Actual Survey	Soil Type	Land Form	Vegetation	LSA	TT/TIW - LTT/TIW	LTT/TIW - Plain	Plain	Unknown	Total
Low Coastal Plain	2	0	P2E	NA	NA						
Lutsangani Upland	11	19	AA	V	IIb				1		1
	6	18	UE2	V	IIb				1		1
	68	59	UT2	HS	IIb		1	1	3		5
				HT	IIb	1			3		4
				V	IIb					2	2
Dzitsoni Upland	12	4	UL	HS	IIa					3	3
				V	IIb				1		1
	1	0	HX2	NA	NA						
Total	100	100	NA	NA	NA	1	1	1	9	5	17

Land Form Key: HS = Hill slope, HT = Hill top, V = Valley, NA = Not applicable

Table 5.4 Kauma survey results

Within the Kauma survey region, a total of 5 sites had previously been identified on the shale soils (UT2) of the Lutsangani Upland. These included the TT/TIW to late TT/TIW settlement at Jaribuni's Drift (HgJw6) and a small scatter of LSA tools observed along a road cutting at Konjora Hill (HgJx5), both recorded by Soper (1966); and the historically documented 19th century trading centres at Mtsanganyiko (HgJx22) and Konjora (HgJx23), situated at the mouths of the rivers Ndzovuni and Rare, respectively (Spear, T. 1981b: 119-121; Brantley, C. 1981). In addition, the Kauma's principle Kaya, Kaya Kauma (HgJw7), and its adjacent secondary off-shoots, Kaya Kambe (HgJw34) and Kaya Ribe (HgJw35), are situated on the limestone soils (UL) of the Dzitsoni Upland, overlooking the Ndzovuni River valley below (Robertson, S. 1987; Willis, J. 1996: 86).

During the 1996/97 survey, a further 10 sites were identified, increasing the total number of known sites to 17. Only 1 site had surface evidence with diagnostic ceramics decorated with late TT/TIW attributes, and 6 sites were characterised by post-1500 plain wares. A further 2 sites were identified by local informants as being well-known areas of past settlement, but perhaps due to the poor surface visibility and contemporary habitation, no diagnostic materials were observed. The typological and locational attributes for each site are listed in table 5.4; and detailed site descriptions are given in Appendix A.2. The distribution of all sites in relation to soil types and local topography are shown in figure 5.5.

Explored chronologically, this distribution of sites would suggest a sparse and probably intermittent period of activity by LSA hunter-gatherer communities utilising the lowland shale savanna vegetation (vegetation zone IIb) and wild fauna of the Lutsangani Upland. No permanent occupation was observed in the surveyed quadrant until the late first and early second millennium AD, when the TT/TIW and late TT/TIW communities appear to inhabit the western margins of the Lutsangani Upland, below the lowland dry 'Sokoke' type forest (vegetation zone IIa) of the northern Dzitsoni Upland. By the later second millennium AD, this population is seen to expand eastwards, particularly along the valley bottoms, slopes and hill tops of the Lutsangani Uplands, presumably clearing away the existing savanna to cultivate the fertile shale soils.

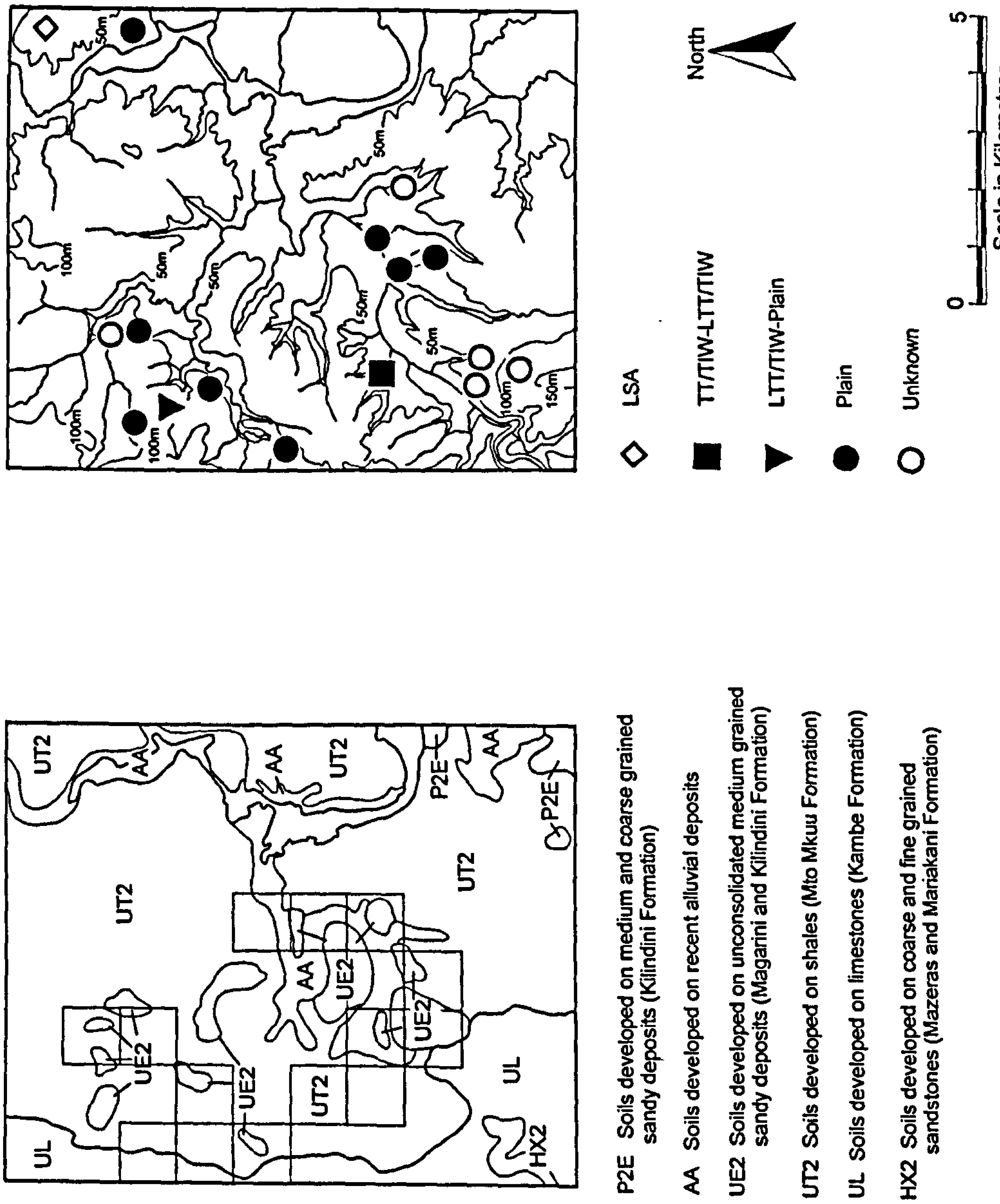

Figure 5.5 Site distribution and soil types within the Kauma survey region

5.3.3 Mwakuhenga (Map Sheets 198/1, 198/2, 198/4)

An area 1 km south of the Kauma survey region was selected to explore the boundary between the 'Swahili' Low Coastal Plain, and the 'Mijikenda' Coastal Uplands. Located 7 kms south of Kilifi, and 7 kms west of Takaungu, north-west and south-east of the Sinawe-Mwakuhenga river valley, the survey region encapsulates an area 90 km² and includes parts of the Low Coastal Plain, the Pingilikani Upland, the Lutsangani Upland, and the Dzitsoni Upland. A total area of 15 km² was sampled, giving a survey intensity of 16.7% (see table 5.1 above). This was distributed across the survey region, with a total 48% of the actual survey area being located in the Low Coastal Plain, 20% in the Lutsangani Upland, 19% in the Pingilikani Upland, and 13% in the Dzitsoni Upland (see table 5.5 below).

Socio-Natural Zone	% Survey Region	% Actual Survey	Soil Type	Land Form	Vegetation	MSA	LSA	LSA – LTT/TIW	LSA – Plain	LTT/TIW	Plain	Unknown	Total
Low Coastal Plain	16	23	AA	V	III					1	2		3
	24	25	P2E	HS	III						1		1
				HT	III						1		1
				V	IIa						2		1
				F	IIa						2		2
Pingilikani Upland	12	16	UE1	HT	III						1		1
				HS	III						1		1
	5	3	UE2	NA	NA								
Lutsangani Upland	1	0	AA	NA	NA								
	25	20	UT2	HT	IIb				1				1
				HS	IIb					2			2
Dzitsoni Upland	17	13	UL	HS	IIa	1	1	1		1		2	6
				HT	IIa							1	1
				V	IIa							1	1
Total	100	100	NA	NA	NA	1	1	1	1	4	10	4	22

Land Form Key: HS = Hill slope, HT = Hill top, V = Valley, F = Flats, NA = Not applicable

Table 5.5 Mwakuhenga survey results

The Mwakuhenga survey region includes 6 rock shelters identified by Soper in 1966 (1966; 1975). These have been formed in the limestone outcrops of the Dzitsoni Upland, along the once forested east-facing slopes (vegetation zone IIa). Of these, 3 rock shelters gave no evidence of past human activity and have been recorded as archaeologically 'unknown', 1 rock shelter had lithic artefacts associated with the MSA, and 2 had LSA microliths and pottery sherds. These last were both excavated by Soper: Mzungu wa Iwe (HgJw2) to a depth of 0.75 m during which 2 main strata were identified and Sinseme Cave (Mwanzumari) (HfJw 3) to depth of 0.95 m during which 3 main strata were identified.[2] Both trenches were very small and had to be abandoned before the natural sub-soil was reached. Finds included plain pottery sherds, sea

[2] Soper's notes and the excavated materials from Mzungu wa Iwe (HgJw2) and Sinseme Cave (HgJw3) are held at the British Institute in Eastern Africa, Nairobi. Acknowledgement is extended to the British Institute for giving access to these materials.

shells, bones of mostly small-sized wild fauna and microliths, suggesting that each site had continued to be occupied intermittently since the LSA. Analysis of the lithic artefacts has led Soper (1966) to argue that there is a strong contrast in the microlithic industries between each site, despite being only 3 km distance between them, and it is unclear when and for how long these industries continued. Indeed, it would seem likely that the layers have been intermixed at a later stage, evident by the occurrence of plain pottery within the upper horizons. However, a fragment of an iron blade, and a sherd with Kwale Ware-like fabric and a parallel grooved line decoration, both recovered from Sinseme, gives strong support that this cave was also used during the early first millennium AD.

In addition, Kaya Starehe, (HgJw33), situated on a hilltop over looking the east-facing slopes of the Dzitsoni Upland is included within the north-west corner of the survey region (Robertson, S. and W. Luke, 1993: 6:16). This has not been visited by archaeologists and no search for surface materials was possible during 1996/97. However, historical research on Kauma family histories by Willis (1996: 85) would suggest that this Kauma Kaya must at least pre-date the 1860's.

A further 15 sites were identified during the 1996/97 survey, increasing the total number of located sites to 22. These include 10 sites with post-1500 AD plain wares, 3 sites with late TT/TIW sherds, 1 site with a scatter of LSA lithic artefacts, and a further rock shelter site which could not be dated due to a lack of surface materials. A summary of the typological and locational attributes of all 22 sites is shown in table 5.5; individual site descriptions are given in Appendix A.3. Figure 5.6 shows the distribution of sites in relation to local topography and soil types.

The concentration of MSA and LSA rock shelters situated along the eastern escarpment of the Dzitsoni Uplands is significant, and might suggest that these communities occupied this area so as to maximise access between the different habitat resources offered by the shale savanna to the east, and the Lowland dry 'Sokoke' forest to the west. No further evidence for Kwale Ware or TT/TIW sites was identified in this survey region, and it would seem that any settlement here during the first millennium AD was widely dispersed and small-scale. However, by the early second millennium AD we see an expansion of late TT/TIW sites from the Dzitsoni Upland, into the Lutsangani Upland, and neighbouring Low Coastal Plain. This continues into the later second millennium AD, particularly along the tributary valleys of the River Sinawe and adjacent hill tops and slopes of the Pingilikani Upland.

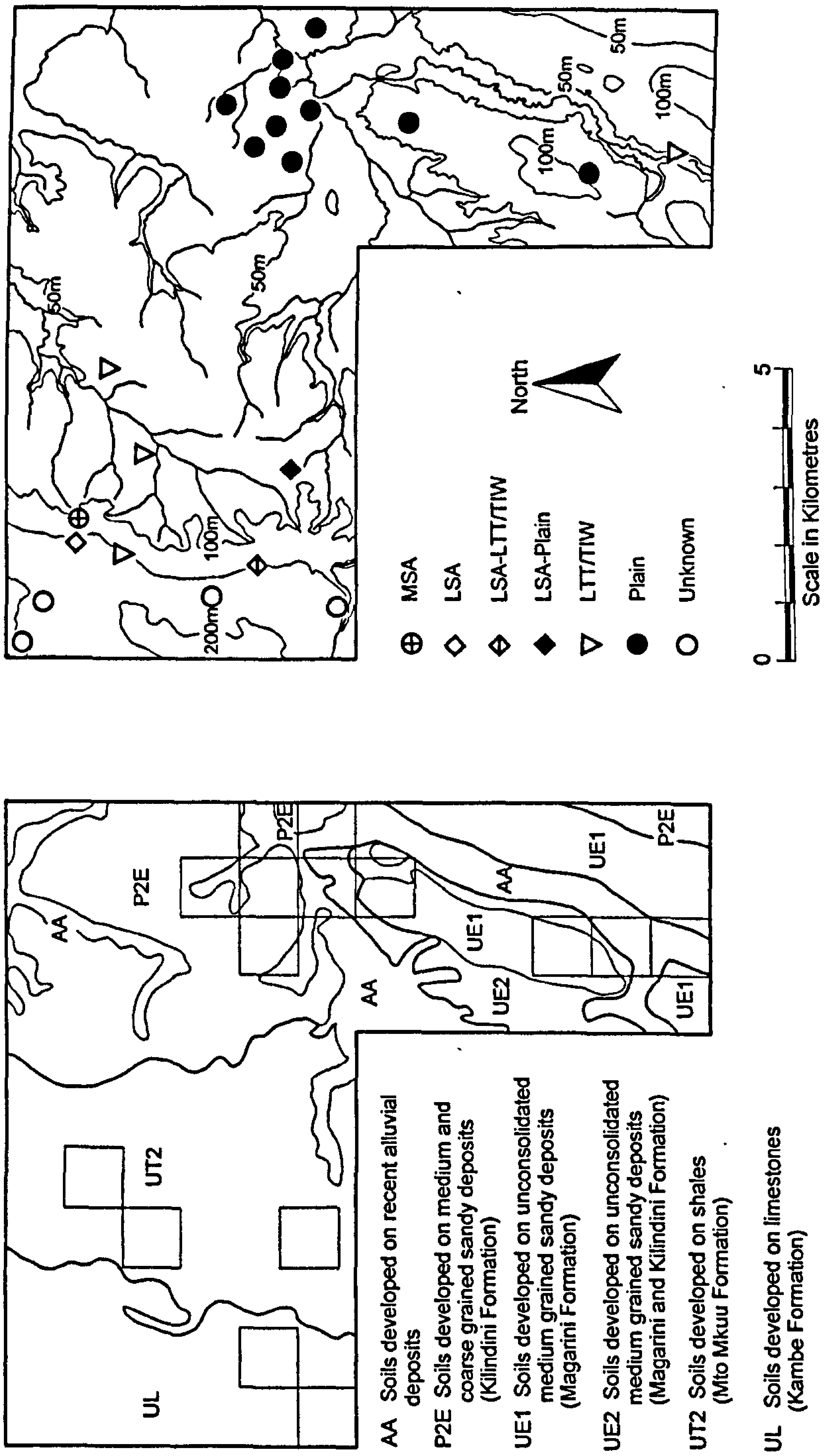

Figure 5.6 Site distribution and soil types within the Mwakuhenga survey region

5.3.4 Kinarani (Map Sheets 198/2, 198/4)

The Kinarani survey region is located some 12 km north-west of Kaloleni trade centre and 7 km west of the Mwakuhenga survey region. The survey region encapsulates an area 56 km². This is confined to the drier, north-western half of the Kaloleni Uplands, where the relatively poor Mariakani soils (USK) were at one time covered by lowland woodland (vegetation zone III) grading into dry lowland forest (vegetation zone II) to the west and north. The region is intersected by a series of seasonal river tributaries forming gently sloping valleys, which eventually join the River Ndzovuni to the north. A total area of 18 km² was sampled, giving a survey intensity of 32.1% (see table 5.1 above). This was distributed evenly between the soil types identified, in proportion to their actual area occurring within the survey region (see table 5.6 below).

Socio-Natural Zone	% Survey Region	% Actual Survey	Soil Type	Land Form	Vegetation	TT/TIW - LTT/TIW	LTT/TIW	Plain	Unknown	Total
Kaloleni Upland	11	11	AA	V	III		1			1
	89	89	USK	HT	II		1			1
					III			1		1
				HS	III		1	4	1	6
				V	III	1	1			2
Total	**100**	**100**	**NA**	**NA**	**NA**	**1**	**4**	**5**	**1**	**11**

Land Form Key: HS = Hill slope, HT = Hill top, V = Valley, NA = Not applicable

Table 5.6 Kinarani survey results

There has been no previous archaeological fieldwork undertaken within the Kinarani survey region. However, the collection of oral traditions by Spear (1978:30-33; 1982) had identified this area as an important dispersal point for those northern Mijikenda who had migrated here from Mwangea Hill (see 5.3.1 above). In all, a total of 11 sites were identified during the 1996/97 survey.

These include the excavated TT/TIW to late TT/TIW ceramic site at Mtsengo (HgJw12) (see Chapter 5), a further 4 sites with late TT/TIW ceramics at Kwa Demu (HgJw16, HgJw17), Kinarani (HgJw18) and Murikwa (HgJw31), and a total of 5 sites with post-1500 plain wares. In addition, the location of a reputed settlement area was recorded at Kithengwani (HgJw20), although no surface materials were immediately visible. A summary of the typological and locational attributes of all sites located within the Kinarani survey region are shown in table 5.6; individual site descriptions are given in Appendix A.4. Figure 5.7 shows the distribution of sites in relation to the soil types and local topography.

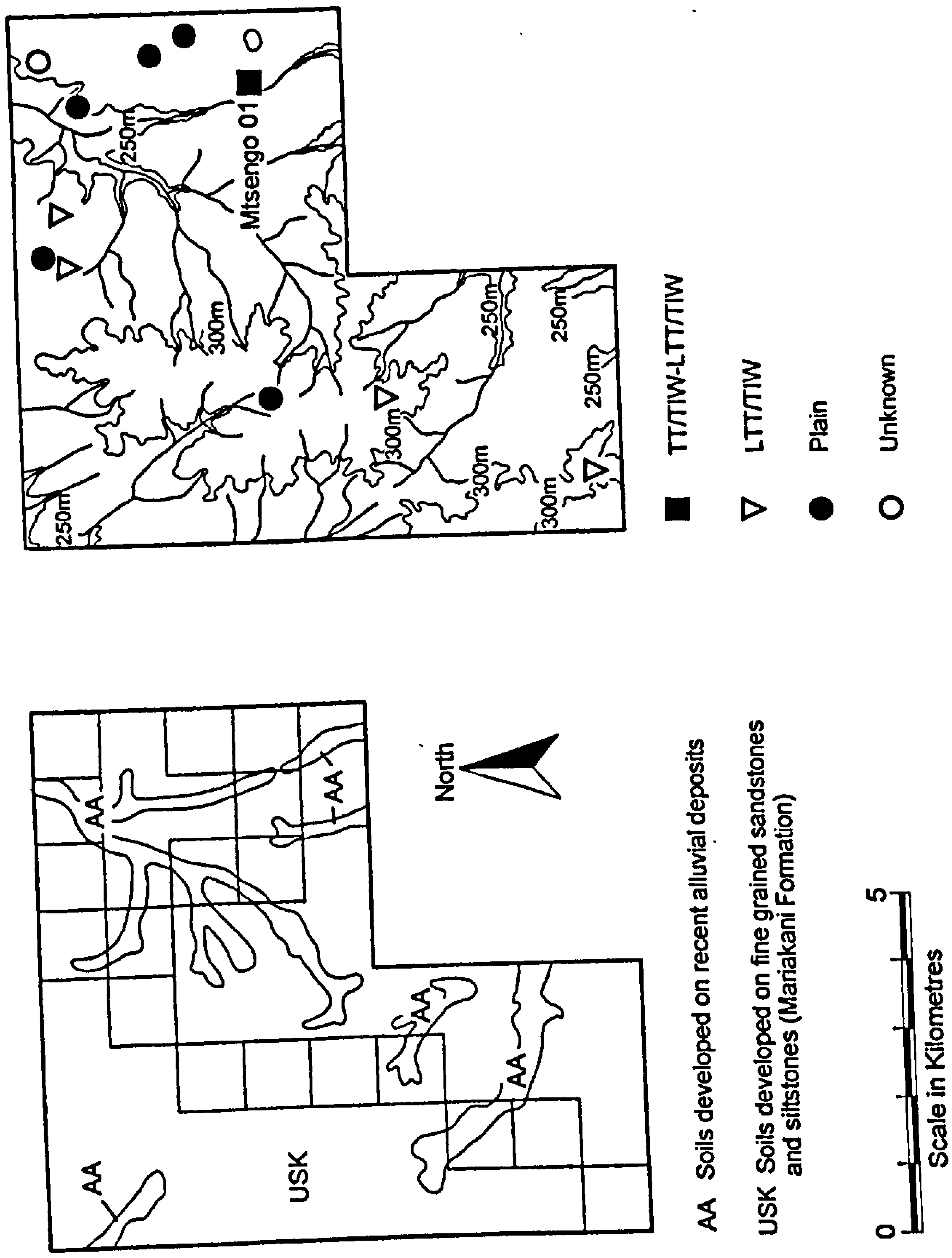

Figure 5.7 Site distribution and soil types within the Kinarani survey region

The apparent absence of observed Stone Age and Kwale Ware sites in the Kinarani survey region might suggest that the north-western Kaloleni Uplands proved to be a less than popular habitat for the early hunter-gatherer and farming communities. Indeed, by the late first millennium AD, settlement is still restricted to the region's eastern boundary, where the agricultural potential is slightly improved by the nearby sandstone soils of the Mazeras Formation. Thus it is plausible that early communities sought to locate settlements in the wetter, eastern zones of the Coastal Uplands. However, by the early second millennium AD, settlement is seen to have spread westwards across the survey region. This expansion is best explained by a parallel shift in the subsistence economies at this time, with an increased emphasis towards domestic cattle from the 10^{th} century AD onwards, allowing communities to leave the more agriculturally suitable lands to the east (see Chapter 8).

5.3.5 Jibana (Map Sheet 198/3)

The Jibana survey region was established along the margin between the eastern Foot Plateau and western Coastal Range of the Coastal Uplands, some 4 km south and east of the Kinarani survey region. This provides a cross-section through the area of most intensive Kaya settlement, situated along the originally forested hilltops and slopes of the Kaloleni and Dzitsoni Uplands, but also including parts of the Lutsangani and Rabai Uplands (see Chapter 4). The survey region encapsulates an area 134 km^2. Of this, a total 27 km^2 was sampled, giving a survey intensity of 20.2% (see figure 5.1 above). This is concentrated in the eastern margin of the Kaloleni Upland (58%), with a small area of the Rabai Upland (2%) included to its west, and the remaining survey area evenly distributed between the Dzitsoni (20%) and Lutsangani Uplands (20%) to the east (see table 5.7 below).

There has been no systematic archaeological survey undertaken within the Jibana survey region. The only known archaeological site had been identified and test excavated by Soper (1966; 1975) at Cha Simba (HgJw4) during his exploration of the limestone caves and rock shelters situated along the Dzitsoni Upland. This was excavated to a depth of 2.05 m during which 10 horizons were encountered. Finds included LSA microliths and bones of mainly small wild fauna, with a small sample of undecorated pottery sherds collected from the upper 2 horizons, supporting a seemingly typical pattern of intermittent occupation since the LSA period onwards (see section 5.3.3).

However, a further 15 sites had been recorded previously due to their cultural significance to the local Mijikenda communities. Of these, 2 are similarly situated within the, as yet unexplored, rock shelters formed in the limestone of the Dzitsoni Upland, and are used as contemporary ritual foci or Sacred Groves (Robertson S. and W. Luke 1993: 6:14-15). The remaining 13 sites have been identified as Kaya. These include the 3 primary Kaya at Chonyi (HhJw74), Jibana (HhJw80) and Kambe (HhJw84), which are believed to have been the first Kaya established immediately following each group's migration from Shungwaya, and a total of 10 identified secondary or tertiary Kaya, believed to have been founded as each group gradually subdivided (Robertson, S. 1987; Robertson, S. and W. Luke, 1993; Spear, T. 1978; Willis, J. 1996). All are situated on the Mazeras sandstone soils (US) of the eastern Kaloleni Upland. Access was arranged to 7 of these secondary and tertiary Kaya, and surface observations identified 1 site with TT/TIW and late TT/TIW ceramics, 2 sites with late TT/TIW ceramics, and 4 sites with plain ceramics. Permission to access the primary Kaya was not granted by the elders.

Socio-Natural Zone	% Survey Region	% Actual Survey	Soil Type	Land Form	Vegetation	LSA – LTT/ TIW	LSA – Plain	Kwale	Kwale – TT/ TIW	Kwale - Plain	TT/ TIW	TT/TIW - LTT/ TIW	LTT/ TIW	Plain	Unknown	Total
Lutsangani Upland	8	2	AA	V	NA											
	3	6	HX1	V	V				1							1
	1	1	UE2	HT	IIb				1							1
	26	11	UT2	HT	IIb								1			1
Dzitsoni Upland	20	20	UL	HS	V				2					1	1	4
				HT	V		1							1		2
				V	V		1				1			3	1	6
Kaloleni Upland	32	47	US	HS	V	1		1	1	1	1		2	10		17
				HT	V							1	3	4	6	14
				V	V									2		2
	8	11	USK	NA	NA											
Rabai Upland	2	2	UO	NA	NA											
Total	100	100	NA	NA	NA	1	2	1	5	1	2	1	6	21	8	48

Land Form Key: HS = Hill slope, HT = Hill top, V = Valley, NA = Not applicable

Table 5.7 Jibana survey results

The 1996/97 survey identified a further 32 sites, bringing the total number to 48. This included 2 sites with LSA materials intermixed with late TT/TIW and post-1500 AD plain ware ceramics, respectively, and a total of 7 sites with ceramics attributable to Kwale Ware, 5 of which were seen to be intermixed with TT/TIW ceramics, and 1 intermixed with post-1500 plain ware ceramics. Of the later, single period sites, 2 sites with TT/TIW ceramics, and 4 sites with late TT/TIW ceramics were identified. Finally, a total of 17 sites were identified with post-1500 AD plain ware ceramics only. The typological and locational parameters are summarised in table 5.7 above; detailed site descriptions are given in Appendix A.5. The distribution of sites located within the Jibana survey region are shown in figure 5.8 below.

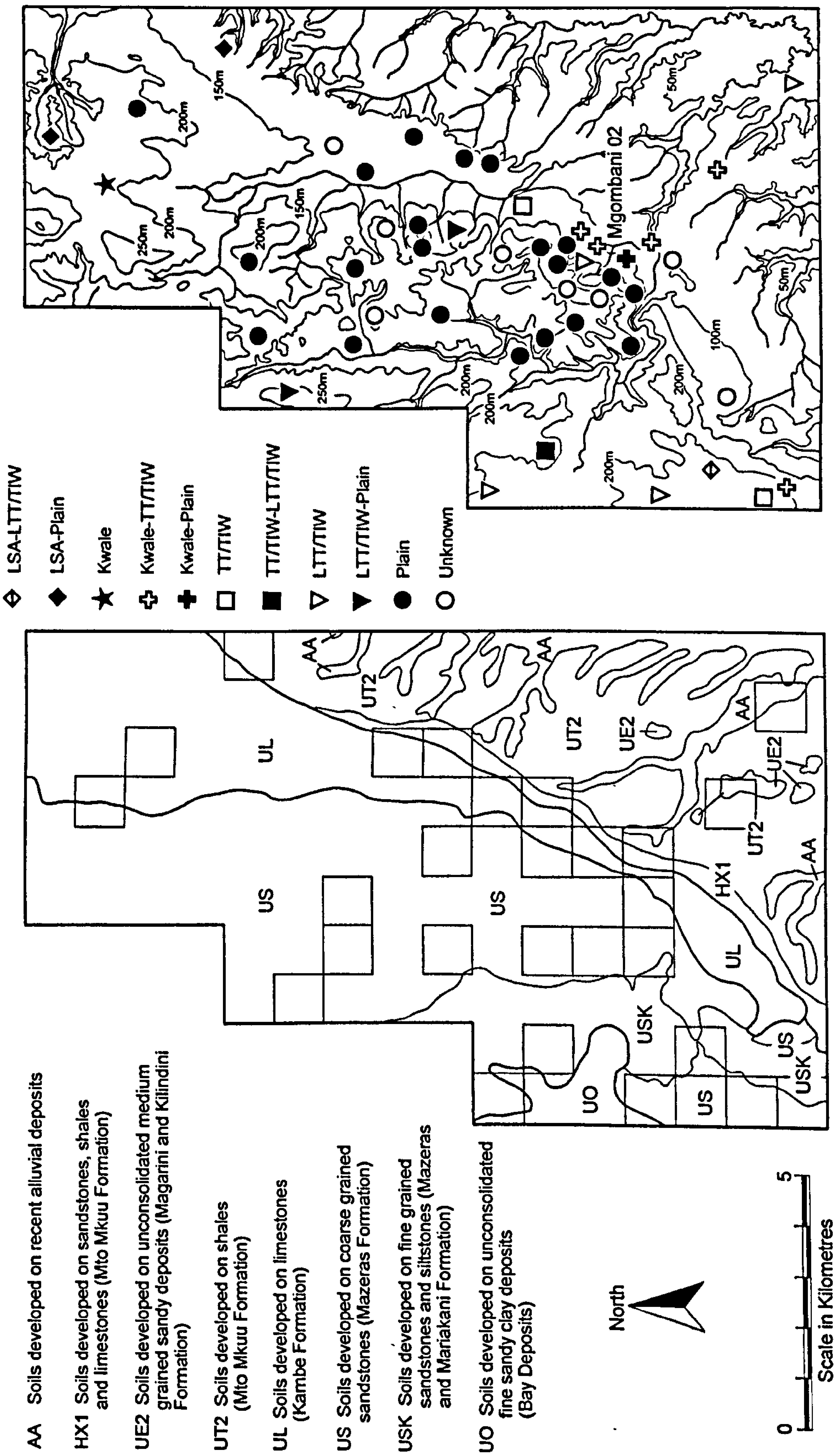

Figure 5.8 Site distribution and soil types within the Jibana survey region

Whilst only tentative conclusions can be drawn, the general distribution of these sites would suggest a marked spatial pattern in the location of settlements through time. All but 1 of the observed LSA sites are situated on the Kambe limestone soils (UL) of the Dzitsoni Upland, the exception being situated on the eastern Mazeras sandstone soils (US) of the Kaloleni Upland.

During the early first millennium AD, this pattern would seem to continue. However, settlement is also seen to expand eastwards into the Lutsangani Upland, either on the escarpment slopes (HX1) immediately below the Dzitsoni Upland, or on the few scattered plateaux formed by the remnant Magarini and Kilindini sands (UE2). Many of these sites show evidence for continuity into the TT/TIW period. During the late first and early second millennium AD, there is a notable expansion of settlement westwards into the Kaloleni Upland, as populations spread to the margins of the more agriculturally suitable lands (see section 5.3.4 above). Suprisingly, by the late second millennium AD, most of the earlier settlements within the Lutsangani Upland seem to have been abandoned, whilst at the same time, to the west, this is paralleled by settlement growth, particularly along the forested hilltops and slopes of the eastern Kaloleni Upland. Such a settlement pattern continues today, with the intensively cultivated Lutsangani Upland farmed by communities living within the neighbouring Dzitsoni and Kaloleni Uplands (see Chapter 4).

5.3.6 Rabai (Map Sheet 198/3)

The Rabai survey region is situated 1 km south of the Jibana survey region, between Mazeras and Ribe trade centres, some 7 km north-east of Mombasa. It extends the survey of the Kaloleni Upland southwards, beyond the southern limits of the Dzitsoni Upland, continuing as a narrow band between the Lutsangani Upland to the east, and the Rabai Upland to the west (see Chapter 4). Here the boundary between the Kaloleni and Lutsangani Uplands is clearly demarcated by the steep rise of the Mazeras escarpment, where it is dissected by two main river valleys, the Kombeni to the north, and the Mtsapuni to the south, both of which enter Tudor Creek in the south-eastern corner of the survey region. The survey region encapsulates an area 123 km². Of this, a total area of 15 km² was sampled, giving a survey intensity of 12.2% (see table 5.1 above). This is mainly concentrated within the Kaloleni Upland, which accounts for 57% of the total actual surveyed area, but also extends into the Lutsangani Upland (19%) to the east, and the Rabai Upland (24%) to the west (see table 5.8 below).

Perhaps due to its situation on the mainland opposite Mombasa, the Rabai survey region has received a relatively high degree of archaeological fieldwork. Soper's survey in 1966 had identified 2 sites. Mbuyuni (HhJw1), situated on the unconsolidated Bay soils (OU) of the Rabai Upland, was seen to have been a late

TT/TIW settlement area. Previously recorded by Griffiths (1935:267) as the primary Duruma Kaya, a claim which was confirmed by local Duruma informants during the 1996/97 survey, this site was selected for a more detailed program of survey and excavation during 1997 (see Chapter 6).

Socio-Natural Zone	% Survey Region	% Actual Survey	Soil Type	Land Form	Vegetation	MSA	TT/TIW	TT/TIW – Plain	LTT/TIW	Plain	Unknown	Total
Lutsangani Upland	7	0	AA	V	NA							
	34	13	UT2	V	IIb				1			1
	2	1	UE2	NA	NA							
	8	5	HX1	NA	NA							
Kaloleni Upland	9	44	US	HS	V		1		1	1	2	5
				HT	V			2		1	1	4
				V	III		1			1		2
	1	1	USK	HT	V						1	1
	7	12	HX2	HS	III	1				1		2
				HT	III					1		1
Rabai Upland	32	24	UO	F	II				2			2
				HS	V						2	2
Total	**100**	**100**	**NA**	**NA**	**NA**	**1**	**2**	**2**	**4**	**5**	**6**	**20**

Land Form Key: HS = Hill slope, HT = Hill top, V = Valley, F = Flats, NA = Not applicable

Table 5.8 Rabai survey results

The second site, at Nduguni Mkoni (HhJw3), situated on the Mazeras and Mariakani soils (HX2) of the Mazeras escarpment, was a later hill-top settlement, identified by an extensive scatter of post-1500 plain ware sherds, and believed to have been occupied by the Duruma as a defensive position during the 19th century Massai raids.[3] Fieldwork by Omi (1984), whilst focusing on the MSA to LSA site of Mtongwe, south of Mombasa, had also identified other stone-working sites scattered around the immediate mainland overlooking Mombasa. This included the MSA Mombasa Water Pump site (HhJw5), also situated on the hill slopes of the Mazeras escarpment.

Finally, a further 8 Kaya sites have been identified by Roberston and Luke (1993) within the Rabai survey region. With the exception of Kaya Ivuni (HhJw88), situated like Kaya Mbuyuni on the Rabai Upland, these are all located on the Mazeras sandstone soils of the eastern Kaloleni Upland. An historical assessment of all but 2 of these Kaya has been conducted by Willis (1996). In addition, Mutoro (1987: 178-189), has excavated a series of small test pits in Kaya Bomu (HhJw86) and Kaya Mudzi Mwiru (HhJw90), during which he identified 3 main occupation horizons, the ceramics from which were seen to reflect a gradual transition between TT/TIW to late TT/TIW and post 1500 plain wares (Mutoro, H. 1994/5: 258). Access was

[3] Interview with Mzee Kalume Sombo Mwajosi, Mzee Ngome Wato and Mzee Sombo Mwero Mwadzosi (Duruma), Mbuyuni Area, 5th January, 1997.

only granted to Kaya Mudzi Mwiru, and the outer gates of Kaya Bomu. None of the other Kaya sites have yet been assessed archaeologically.

The 1996/97 survey identified 10 new sites, increasing the present number of known sites to 20. Of these, 2 sites have TT/TIW ceramics, 3 sites have late TT/TIW ceramics, and 4 sites have post-1500 plain ceramics. Access to the final site, a Sacred Grove, situated within a woodland copse at Bemravai, was not allowed, preventing any detailed archaeological assessment to be made. A summary of the locational and typolopgical attributes of these sites is shown in table 5.8 above; Appendix A.6 gives individual descriptions of each site identified within the Rabai survey region. Figure 5.9 shows the distribution of these sites, in relation to the soil types and local topography.

With the exception of the single MSA site situated on the east-facing slopes of the Mazeras escarpment, there appears to have been no intensive settlement of the Rabai survey region until the late first millennium AD. During this period early TT/TIW communities settled along the moist rain forested sandstone hill tops and slopes which form the Kaloleni Upland. By the early second millennium AD, these communities seem to have expanded eastwards into the lowland savanna of the Lutsangani Upland, and west into the dry lowland forest of the Rabai Uplands. However, again, by the later second millennium AD, these settlements are abandoned, and settlement retreats back into the hills of the Kaloleni Uplands.

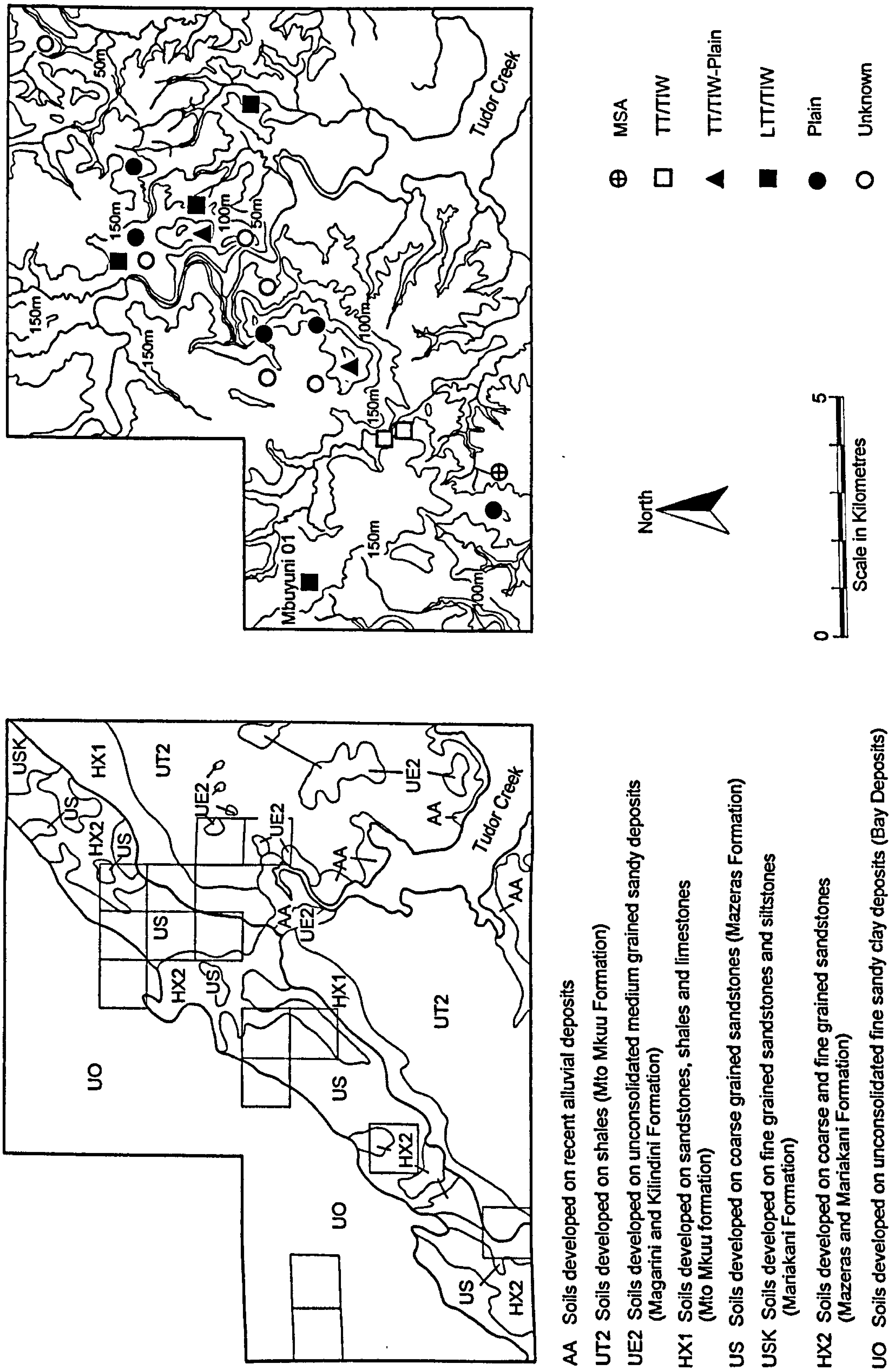

Figure 5.9 Site distribution and soil types within the Rabal survey region

5.3.7 Kwale (Map Sheets 200/1, 200/2)

The Kwale survey region is located 2 km south of the Rabai survey region, and 1 km north of Kwale trade centre, between the northern Shimba Hills and Port Reitz Creek. This encapsulates an area 141 km², and includes part of the Shimba Plateau and surrounding Kwale Uplands in the south and west, and the Lutsangani Uplands to the north and east, with a small section of the southern Dzitsoni Upland extending from the north between (see Chapter 4). A total area of 18 km² was sampled, giving a survey intensity of 12.8% (see table 5.1 above). This was approximately evenly distributed across the socio-natural zones, relative to the size of area included within the survey region. Thus 40% of the actual surveyed area was included within the Shimba Plateau, 27% was included within the Lutsangani Upland, 25% was included within the Kwale Upland, and 8% was included within the Dzitsoni Upland (see table 5.9 below).

Socio-Natural Zone	% Survey Region	% Actual Survey	Soil Type	Land Form	Vegetation	TT/TIW	TT/TIW - LTT/TIW	LTT/TIW	Plain	Unknown	Total
Lutsangani Upland	3	8	AA	V	NA						
	28	17	UT2	HS	IIb			4	2		6
				HT	IIb		1				1
				V	II				1		1
	2	2	UE1	HS	IIb					1	1
				P	IIb				1		1
Dzitsoni Upland	6	8	UL	HS	II				1	1	2
Kwale Upland	31	24	US	HS	II				1	1	2
				HT	IIb					1	1
				V	II	2				1	3
	3	0	USK	NA	NA						
	3	1	HX2	HT	II			1		2	3
Shimba Plateau	8	12	HX2	HS	II			1			1
				V	II	1				1	2
	16	28	UE1	P	V/VI			2	2		4
				V	II					1	1
Total	100	100	NA	NA	NA	3	1	8	8	9	29

Land Form Key: HS = Hill slope, HT = Hill top, V = Valley, P = Plateau, NA = Not applicable

Table 5.9 Kwale survey results

There has been no systematic field survey undertaken within the Kwale survey region, despite being situated only 1 km north of the Kwale Ware type-site (HiJv1) excavated by Soper in 1966 (Soper, R. 1967a). Survey below the Shimba Plateau, by Abungu (1994/5) during 1994, had identified 3 TT/TIW settlements situated within the Chombo River valley on the sandstone soils of the Shimba escarpment (HX2) and surrounding Kwale Upland (US). These were revisited in the 1996/97 survey, during which Chombo 01 (HiJv10) was surveyed and excavated (see Chapter 6). The region also includes 6 Kaya sites: Kaya Godoni (HiJv6) situated on the Magarini soils (UE1) of the Shimba Plateau, Kaya Mtae (HiJv19), Teleza (HiJw75), Lunguma (HiJw79) and Gandini (HiJw76) found on the Mariakani and Mazeras (HX2, US) soils of the Kwale

Upland, and Kaya Chonyi (HiJw80) situated on a remnant plateau of Magarini sands (UE1), found within the Lutsangani Upland (Roberston, S. 1987; Roberston, S. and W. Luke, 1993). Mutoro (1987: 190-194) had undertaken a small excavation in Kaya Kwale, situated 1 km west of Kwale trade centre, just outside of the survey region, during which he again reported a sequence of occupation from the 9th century AD onwards.

The 1996/97 survey identified a further 20 sites, increasing the total number of known sites to 29. This included 6 sites with visible late TT/TIW ceramics, and 8 sites with post-1500 plain ware ceramics. In addition, a TT/TIW to late TT/TIW site was located at Mteza (HiJw55), and this was selected for a more detailed program of survey and excavation (see Chapter 5). A further 5 sites were also identified on the basis of local oral traditions. Of these, 3 were seen to be Sacred Groves, still in use by local communities, each being situated within a steeply sided valley cutting through the lower hill slopes of the Shimba Plateau. The remaining 2 sites are all reputed past settlement areas, which due to the poor surface visibility caused by thick vegetation, had no immediately obvious concentration of surface materials. The type and locational attributes of sites are summarised in table 4.9 above; individual sites are described in Appendix A.7. Figure 5.10 shows the distribution of sites within the Kwale survey region, in relation to soil types and local topography.

The survey results failed to identify any evidence for Stone Age or Kwale Ware materials, despite such sites existing within neighbouring regions (Soper, R. 1967a; Omi, G. 1984). Furthermore, whilst Mutoro's (1987) excavation at Kaya Kwale has shown that TT/TIW settlements are to be found on the Shimba Plateau, those TT/TIW sites identified during the 1996/7 survey were all seen to be located below the Shimba Plateau, either on the Kaloleni Upland, or less commonly, on the the shale soils of the Lutsangani Upland. This pattern might well be a result of the natural vegetation zones. The southern Shimba Plateau, which is seen to have evidence for human settlement at least from the early first millennium AD, is seen to have been covered by lowland rain forest intermixed with areas of moist savanna (vegetation zones V and VI). In contrast, the northern edge of the Shimba Plateau, believed to have been covered by the dry, lowland forest (vegetation zone II), has no firm evidence for settlement before the early second millennium AD. Hence it would seem likely that the earlier settlements preferred the rain forest and moist savanna zone to the south, but over-time sought to utilise land elsewhere, gradually expanding their settlements out from this zone into the drier lowland forest of the Kwale and Lutsangani Uplands below.

Upland, and Kaya Chonyi (HiJw80) situated on a remnant plateau of Magarini sands (UE1), found within the Lutsangani Upland (Roberston, S. 1987; Roberston, S. and W. Luke, 1993). Mutoro (1987: 190-194) had undertaken a small excavation in Kaya Kwale, situated 1 km west of Kwale trade centre, just outside of the survey region, during which he again reported a sequence of occupation from the 9^{th} century AD onwards.

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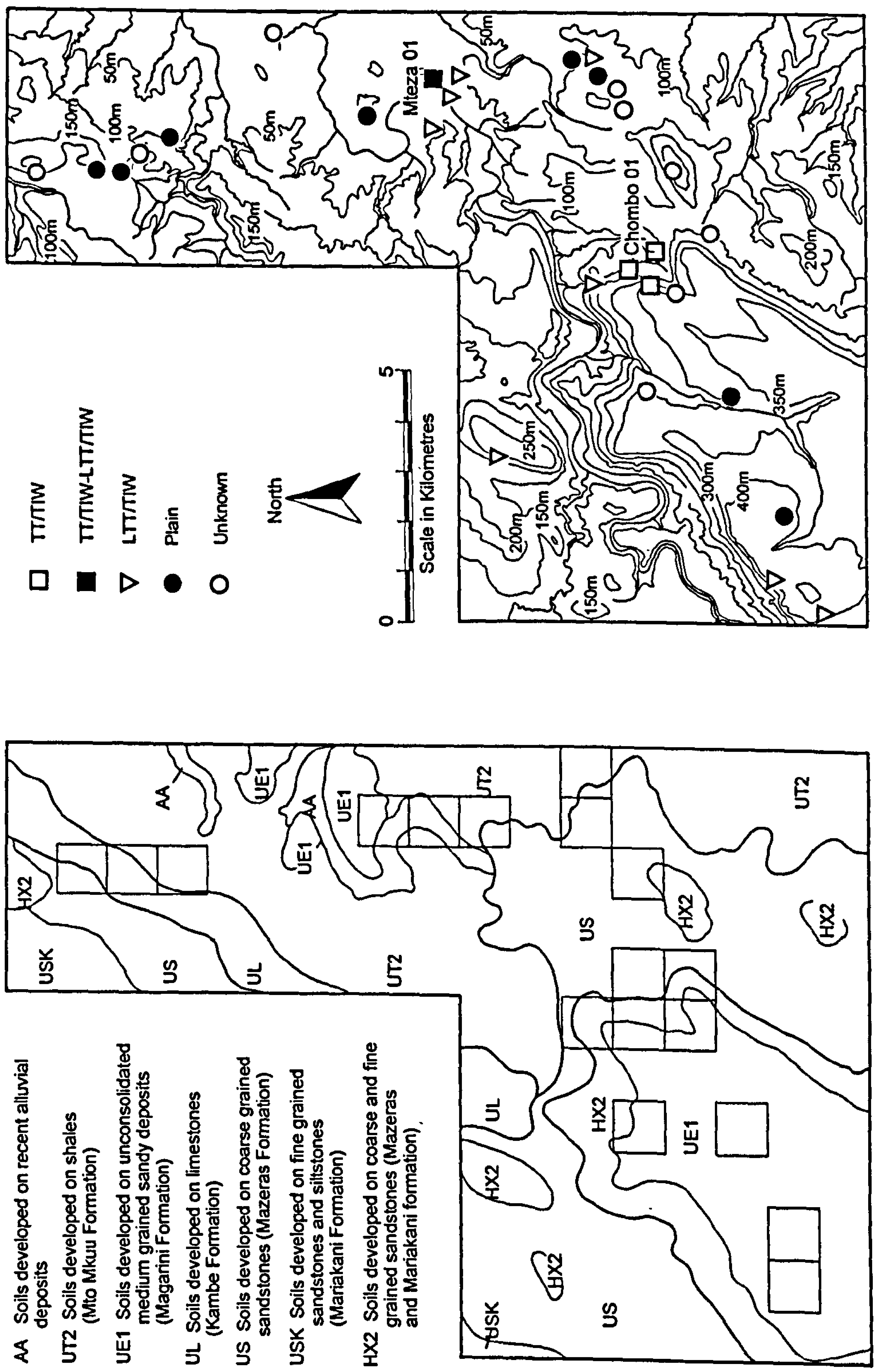

Figure 5.10 Site distribution and soil types within the Kwale survey region

5.4 Summary: locational trends through time

The survey data has successfully illustrated the changing patterns of site location and settlement intensity through time. This will now be used as a basis for analysing and interpreting the data together, as part of a regional framework. Table 5.10 combines the results from all seven of the survey regions with the existing distribution of known archaeological sites (see Appendix B). As was noted in the individual survey regions, many sites exhibited evidence for multi-period occupation. Consequently, in summarising temporal change, it is the individual occurrences of archaeological materials differentiated into typological periods, rather than actual sites, which are counted within each socio-natural zone. In addition, the site density (per Km²) for each socio-natural zone is given. This is found by dividing the total number of sites identified with the total area actually surveyed, within each socio-natural zone. Figure 5.11 illustrates the overall increase in site density through time. Variability in site size is shown in figure 5.12.

Socio-Natural Zone	ESA	MSA	LSA	Kwale Ware	TT/TIW	Wavy-Line	Late TT/TIW	Plain Ware	No Materials	Total Occurrence	Total Area Surveyed (Km²)	Total no. of new Sites	Site Density
Low Coastal Plain	2	5	1		6	2	60	59	8	144	7.16	9	1.3
Pingilikani Upland		2	1			9	6	9	10	37	2.94	2	0.7
Lutsangani Upland		7	2	2	4		14	16	8	53	29.44	30	1
Dzitsoni Upland		1	4	2	3		1	9	11	31	9.4	26	2.8
Kaloleni Upland		1	1	3	8		15	31	14	73	42.31	59	1.4
Kwale Upland		1			2		5	6	6	20	4.46	9	2
Shimba Plateau				4	1		8	7	3	23	7.17	8	1.1
Mwangea Hill				1			1	15	1	18	13.25	17	1.3
Rabai Upland		1					4	3	2	10	4.87	5	1
Kinango Upland							6	8	1	15	No Survey		
High Coastal Plain		1					2	1	1	5			
Totals	2	19	9	12	24	11	123	164	65	429	121	165	

Table 5.10 The number of observed archaeological occurrences in central and southern coastal region of Kenya, with the total surveyed area, no of newly identified sites and corresponding site density for each socio-natural zone

Before this survey, field work had already demonstrated evidence for early stone-working, hunter-gatherers in the coastal hinterland of Kenya. Whilst the chronology of these early palaeolithic coastal communities is as yet unclear, it would seem likely that the survey region has been occupied intermittently and non-intensively by small groups of peoples since the mid-Pleistocene. As was seen in Chapter 3, the occurrence of ESA evidence is restricted to 2 sites, both of which are situated on the Low Coastal Plain, south of Mombasa. In contrast, there are a total 19 MSA sites now identified. These are seen to be concentrated in the vicinity of the ESA sites, around the immediate hinterland of Mombasa, following detailed field study by Omi (1982, 1984, 1986, 1988, 1991) in the same area. However, single occurrences are also seen south in the Kwale Uplands and northwards in the Rabai Upland and High Coastal Plain suggesting a marked increase in human activity during this time. LSA sites are commonly found on the forested, limestone soils (UL) of the Dzitsoni Upland and adjacent sandstone soils (US) of the Kaloleni Upland, with LSA activity also seen to extend onto the Shale Savanna of the Lutsangani Uplands to the east and into the northern reaches of the Pingilikani Upland. Of those sites which fell within the actual survey zones, the 2 MSA sites tend to be very small, less than 0.16 ha in area, whilst the 7 LSA sites are larger, up to 1.32 ha in area (see figure 5.12). Evidence from excavated LSA sites would suggest that the LSA hunter-gatherer communities continued to occupy these areas well into the early first millennium AD, by which time the first evidence for iron-working, Kwale Ware using communities is identified (see section 5.3.3 and Chapter 6).

The 12 known early first millennium AD Kwale Ware sites are all seen to have favoured the same socio-natural zones as the LSA communities; with concentrations observed on the Shimba Plateau and also extending northwards as far as Mwangea Hill. Of these, 5 settlements appear to have continued in use into the later first millennium AD, and analysis of the ceramics would suggest that many Kwale Ware attributes continued into the TT/TIW period supporting arguments for regional population continuity (see Chapter 7). All of the identified Kwale Ware sites were seen to be relatively small settlement units, ranging between 0.12 ha to 3.0 ha, with a median of 1.26 ha (see figure 5.12).

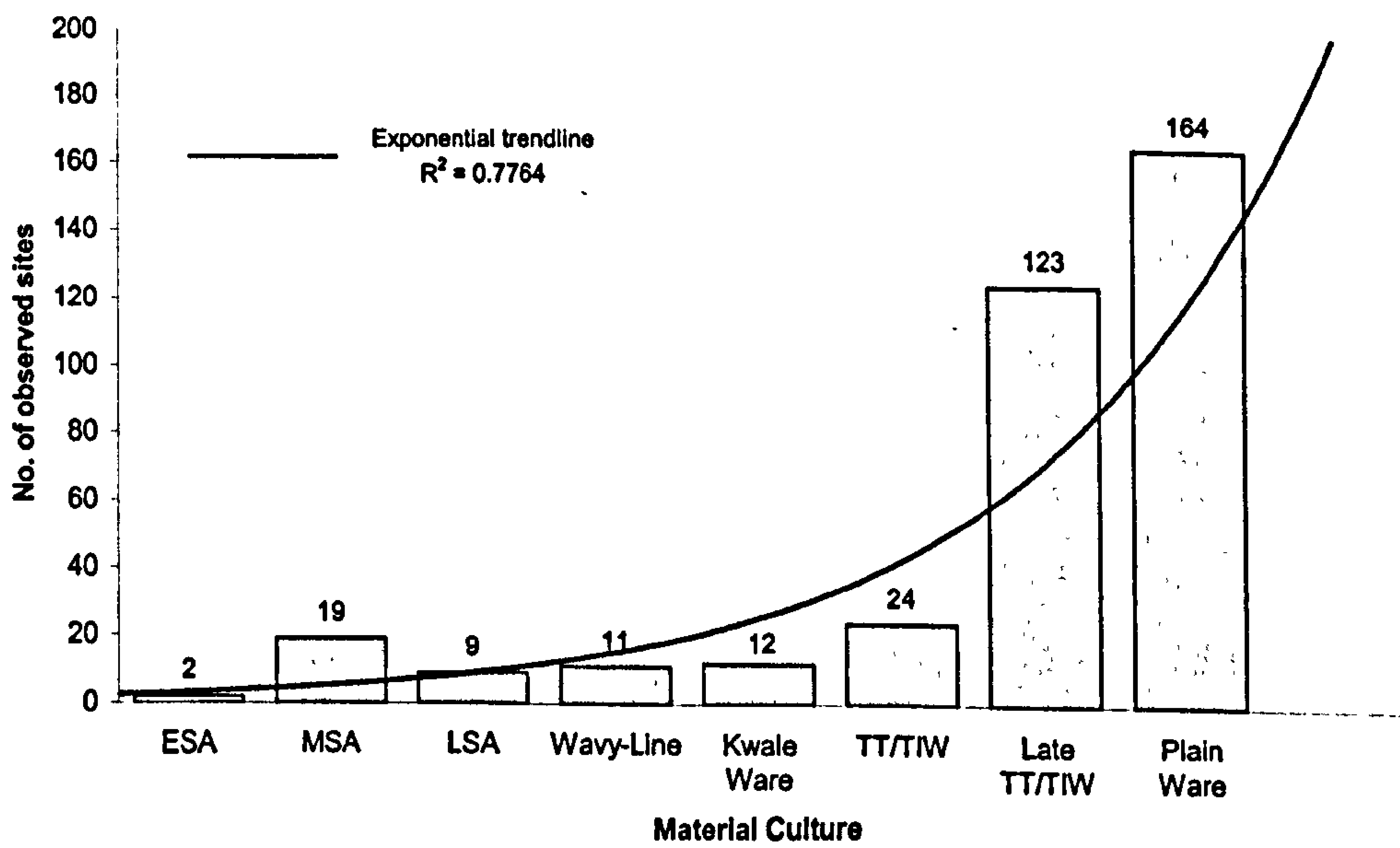

Figure 5.11 Histogram showing number of observed sites by material culture

By the late first millennium AD, the observed site density noticeably increases (see figure 5.11). Settlements continue to grow in the previously settled socio-natural zones, with a growing number of sites slowly clearing the once forested slopes and hill tops of the eastern Kaloleni Upland, and expanding over the northern Shimba Plateau, escarpment, and Kwale Uplands. However, no TT/TIW period settlement is evident in the northern survey region, other than along the Low Coastal Plain. In contrast, in the Pingilikani Uplands north of the River Sabaki, a notably different ceramic group with wavy-line decoration is seen to be concentrated. Perhaps representing the southward expansion of later agro-pastoral peoples, this material is also seen to extend onto the Low Coastal Plain as far south as Gedi (see Chapter 3). Of the 18 TT/TIW sites observed in the survey regions variation in settlement size is considerable, including small settlement unit of only 0.16 ha, to the large scale 7.56 ha multi-component settlement at Mtsengo, equivalent in area to the contemporary smaller urban towns of the coastal littoral (see figure 5.12; Wilson, T. 1982).

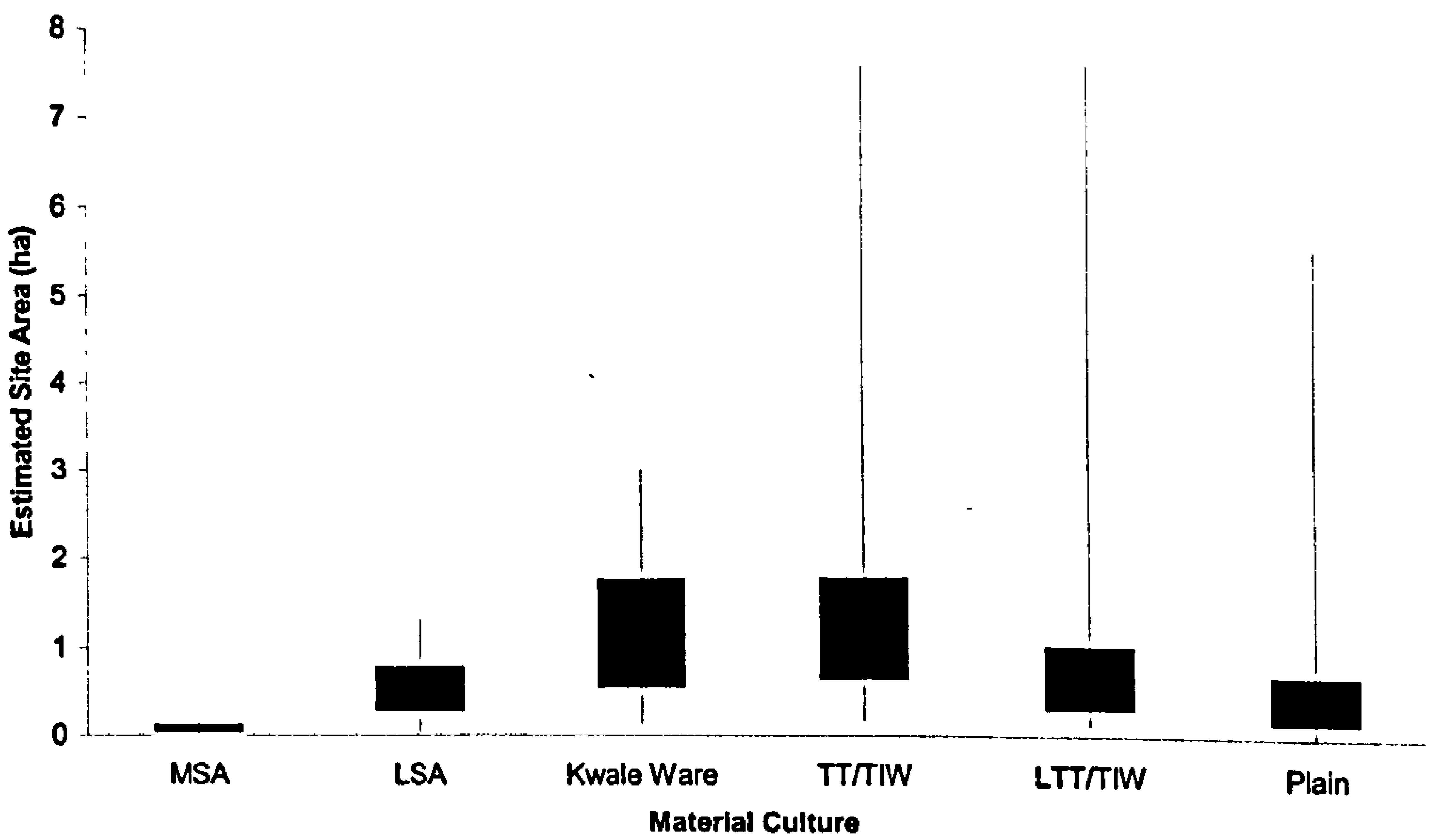

Figure 5.12 Box Plot of estimated site areas observed within survey regions

Again there is some evidence for settlement continuity, with 4 TT/TIW sites being occupied into the first half of the second millennium AD or later. At the same time, the overall site density dramatically increases, with an additional 99 late TT/TIW sites being founded (see figure 5.11). These continue to occupy those socio-natural zones previously settled during the TT/TIW period, but also expand westwards into the Rabai Upland, and back northwards, onto the foot slopes of Mwangea Hill. The greatest concentration of late TT/TIW settlements is seen along the Low Coastal Plain (see table 5.10).

Whilst the same range of settlement size is seen in the late TT/TIW period as was seen in the TT/TIW period, the median size is seen to decrease from 1.26 ha in the TT/TIW period to only 0.59 ha by the late TT/TIW period. This would suggest that the large scale, multi-component settlements established during the late first millennium AD, were, by the mid second millennium AD breaking down into smaller scale single-component settlements, a trend marked by the comparable increase in the number of individual small sites and their wider distribution within the settled socio-natural zones.

This continues into the late second millennium AD, with the overall settlement density increasing to 87 sites and their distribution now encompassing all of the socio-natural zones included within the survey, whilst the overall size of sites continues to decrease. Thus the size of post-1500 plain ware sites range between 0.01 ha to 5.5 ha, with a median of 0.74 ha, which is comparable with the earlier LSA settlement outlined above, and is perhaps equivalent to the modern day settlement pattern of individual, small family homesteads (Mutoro, H. 1987: 161-165).

The data thus identifies a long-term sequence of settlement evidence spanning the mid-Pleistocene to late second millennium AD. Within this sequence, three main trends are emphasised:

i) ***It reflects an increasingly intensive occupation of selective socio-natural zones through time, evident through the corresponding increase in site densities:***

- early settlement, up to the early first millennium AD, would seem to concentrate on the Lowland Rain Forest margins of the Dzitsoni and eastern Kaloleni Uplands, with some small-scale utilisation of the Shale Savanna environment of the Lutsangani Upland
- later settlement, from the late first millennium AD onwards continues to inhabit the same socio-natural zones, encouraged by the rich diversity of the moist forest and savanna resource, and the agricultural potential of the fertile Dzitsoni and Lutsangani soils; but increased settlement intensity and changing subsistence economy encourages expansion into neighbouring environments, notably the drier, Lowland Woodland and Lowland Dry Forest regions of the less agriculturally productive western Kaloleni and Rabai Uplands

ii) ***Fluctuations in the size of sites reflects the changing structure of the settlement hierarchy through time:***

- estimated site sizes show a regular increase from the MSA to early iron-working, farming periods. However, between the early and middle iron-working, farming period, the median size remains relatively constant, whilst at the same time there is a sudden increase in the size and number of large multi-component sites. This is believed to represent the growing development of a complex settlement hierarchy

- from the early second millennium AD, the number and size of the larger multi-component sites remains constant, but the median size of most sites decreases. However, by the late second millennium AD, these larger multi-component sites are also seen to decrease in both size and number. This would suggest that the previous complex settlement hierarchy is now in decline, with a growing number of small-scale family based units representing the gradual sub-division of the larger multi-component sites

iii) ***Continuity in site occupation from the early first millennium AD onwards:***

- there is no direct evidence to confirm continuity between the LSA communities and early Kwale Ware users. However, there is evidence that both communities were influenced by the same environmental factors in site location, and that stone-using hunter-gatherer communities continued to inhabit these regions well-into the early first millennium AD (see Chapter 3)
- there is definite evidence for regional settlement continuity from the early first millennium AD onwards. Overlap between sites of different periods was evident in nearly all of the survey regions. In particular, a fair sample of sites with Kwale Ware pottery were seen to have been occupied through into the TT/TIW period, and newly established sites with TT/TIW pottery were seen to continue through into the late TT/TIW and post-1500 plain ware periods. This is taken to represent strong evidence for continuity in the developing settlement pattern between the early, middle and later iron-working, farming periods

5.5 Landscape archaeology and oral historiography

> *'Scientific knowledge does not constitute a privileged view of the past that in and of itself makes it better than oral traditions. It is simply another way of knowing the past'* (Anyon, R. *et al.* 1996: 15).

The emerging picture of a continuous, but dynamic settlement history would seem to contradict the formal historical construction of the Mijikenda's own *'remembered past'*. During the survey, the collection of new archaeological data would continuously lead us to re-evaluate this established history. In juxtaposition, interviews with local elders would continuously re-establish the important role that such data played for the Mijikenda's own understanding of their landscape and its history. Areas of perceived historical importance are seen to be an essential component in the local verification of oral traditions. Interviews conducted with elders from all nine Mijikenda groups would commonly refer to localities associated with key events in Mijikenda historiography. When visited, these sites would more often than not reveal significant evidence for past human activity. Such a direct association between oral tradition and the material past therefore offered an important opportunity to test the veracity of both their own *'remembered past'*, and that reported by historians.

Oral traditions are structured and modified to fit within their own changing social context (Miller, J. 1980; Tonkin, E. 1992; Vansina, J. 1985), and the Mijikenda's own historical perception is clearly no exception (Willis, J. 1993). As such, reservations have long been voiced against the simplistic use of archaeology as an external tool in the verification of oral traditions (Atherton, J. 1983; Maggs, T. 1976; Schmidt, P. 1978: 5; Vansina, J. 1985: 10), and we can no longer accept any direct and untested conjunction between the two. However, whilst such limitations are correctly realised, the assimilation of local oral traditions and archaeological data must still hold an important role in opening our understanding to alternative, yet equally valid interpretations of the past (Andah, B. 1995:170; Holl, A. 1995: 208; Miller, J. 1980; Raharijaona, V. 1989; Schmidt, P. 1983, 1990; Simyu, V. 1990; Stahl, A. 1994; Vansina, J. 1965: 174).

Oral traditions will often contain symbolic markers to different phases of significant social transformation and change, and it is through such phases, that archaeological data is best seen to relate (Schmidt, P. 1990: 270). As was seen in Chapter 2, Mijikenda historiography is commonly sub-divided into three broadly chronological phases; that is, their origins and migration, their settlement within the Kaya, and their later dispersal out from the Kaya (Spear, T. 1981a: 167; Willis, J. 1996: 75-76). Of these, the first phase recalls *'how things became'*, including why the Mijikenda were forced to leave Shungwaya, and how and where they migrated to. The second phase recalls *'things as they should be'*, which consists of a seemingly uneventful period during which the Mijikenda lived in the security of their respective Kaya whilst maintaining the traditional '*ways of their ancestors in repetitive cycles of orderly social processes*'. The final phase recalls '*things as they are*' in contemporary Mijikenda life, where disorder returns, the young leave the Kaya, and '*elders bemoan the fact that society is falling apart because society no longer follows the way of the ancestors*' (Spear, T. 1981).

Such a framework is, in essence, a contemporary reconstruction of the Mijikenda's own historical perception. However, at the same time it also provides the necessary background of symbolic and temporally ordered social transformations against which the archaeological interpretation of a dynamic settlement history might be compared.

Throughout the 1996/97 survey, recorded interviews were conducted with local elders from all nine Mijikenda groups, during which informants were encouraged to recite oral traditions detailing the past movements and settlement localities of different Mijikenda groups.[4] Following such interviews, elders were often keen to show us the visible material evidence for past settlements areas and in this way, sites already located during the archaeological survey were re-identified as sites occupied at a specific phase in Mijikenda historiography. Local knowledge was collected on 145 (85%) of the 165 sites included within the 1996/97 survey. Of these, 105 (64%) sites gave sufficient archaeological data to evaluate their associated oral traditions. These were classified according to the three phases of Mijikenda historiography outlined above, that is, settlements established before the primary Kaya, settlements occupied at the same time as the Kaya, and settlements occupied following the decline and settlement dispersion out from the Kaya. In addition, a differentiation is made between such settlement areas and the Kaya themselves, and with other Sacred Groves which are not settlement areas and do not necessarily relate to any particular phase (see table 5.11).

Visual examination of table 5.11 would suggest a crude correlation between the observed archaeological materials and the suggested structural order of the oral traditions.

[4] Interviews were conducted in Ki-Swahili and Ki-Giryama by Mohammed Karisa Gohu. All interview tapes and their English transcriptions are held in Fort Jesus Museum, Mombasa.

Material Culture	Phase 1	Phase 2		Phase 3	Sacred Grove	No Oral Tradition	Total Sites
	Pre-Kaya	Contemporary to Kaya	Kaya	Post-Kaya			
MSA						2	2
LSA						2	2
LSA - LTT/TIW				1		1	2
LSA – Plain				2	1		3
Kwale						2	2
Kwale – TT/TIW	1					2	5
Kwale – Plain				3			1
TT/TIW	3	3				1	7
TT/TIW – LTT/TIW	1	1	1			1	4
TT/TIW – Plain			2				2
LTT/TIW	6	2	6	11			25
LTT/TIW – Plain	1					1	2
Plain	7	4	5	46	1	10	73
Unknown	1	2	19	2	8	3	35
Total Sites	20	12	33	65	10	25	165

Table 5.11 Correlation of local oral traditions with observed archaeological materials

Ignoring those sites with no immediately diagnostic surface materials and no associated oral traditions, the data might be summarised as follows:

Phase 1: 'Pre-Kaya' settlements are seen to be associated with sites dating from the early first millennium AD onwards, with 1 site (5%) associated with the occurrence of Kwale Ware pottery, 5 sites (26%) associated with the occurrence of TT/TIW pottery, 8 sites (42%) associated with the occurrence of late TT/TIW pottery and 8 sites (42%) associated with the occurrence of post-1500 AD plain ware pottery.

Phase 2: 'Contemporary to Kaya' settlements and the Kaya themselves are all seen to be associated with settlement dating from the late first millennium AD onwards, with 7 sites (29%) associated with the occurrence of TT/TIW pottery, 10 sites (42%) associated with the occurrence of late TT/TIW pottery, and 13 sites (54%) associated with the occurrence of post-1500 AD plain ware pottery.

Phase 3: 'Post-Kaya' settlements are dateable from the early second millennium AD onwards, with 12 sites (19%) being associated with the occurrence of late TT/TIW pottery, and 51 sites (81%) being associated with post-1500 AD plain wares. This pattern is slightly distorted by the identification of 3 sites with earlier evidence for LSA activity, and 3 sites with earlier evidence of Kwale Ware pottery, the occurrence of which is seen to be unrelated to their later reoccupation.

Finally, sacred groves are all seen to date from the later second millennium AD onwards, with both sites being associated with post-1500 AD plain wares, but one site, re-utilising an earlier LSA rock shelter.

The emerging picture then, is one in which the relative dating of the archaeological materials can be seen to support the general structure of the remembered settlement history. There is a striking correlation between the major transformative stages of the remembered Mijikenda past and the outline of settlement change described above. Hence, the period of initial migration and settlement would seem to relate to the early first millennium AD, when settlement was seen to have been both small-scale and sparse; whilst the period of Kaya occupation, now dateable from the later first millennium AD onwards is seen to be marked by both the gradual proliferation of an expanding settlement organisation and evolving hierarchical complexity. Finally, the third phase, remembered as a period of declining social and political control, is indeed marked by a growing pattern of settlement dispersion, and decline in the size and complexity of the earlier settlement hierarchy.

However, the correlation also emphasises both the increased temporal depth that such traditions contain, most of the sites pre-dating any supposed 16th century migration, and more importantly the inherent temporal variability between sites associated with each remembered phase. Whilst the observed correlation between the collected oral traditions and archaeology has reinforced the validity of local knowledge of landscape change, it has also led to the necessary deconstruction of Spear's (1978) consensual and linear reading of Mijikenda historiography. Interviews conducted during 1996/97, and a review of Spear's (1982) published interview transcripts have suggested that there was a multiplicity of alternative remembered settlement localities which have been ignored in the construction of '*sequential evolutionary patterns of change*' (see also Willis, J. 1996). Yet it is the recognition and incorporation of this multiplicity into our historical reconstruction which will allow for a fuller and more sensitive alternative 'localised' history to be portrayed.

This multiplicity much better suits the observed pattern of settlement distribution identified during the 1996/97 survey, and leads us to question those assumptions which have shaped our understanding of the Mijikenda migration and settlement traditions. Spear's (1978: 27-38) reading simplifies this reality into a homogenous and large-scale movement of people, eventually stopped by the security afforded to them by the forested hill-top Kaya. An alternative reading might seek to emphasise their visible heterogeneity, with individual traditions recalling the movements and past settlement areas of many groups of culturally related peoples. The Mijikenda, like their traditions, have never been a single, homogenous group (Willis, J. 1993: 6). Rather, the evident variability inherent in the Mijikenda's own remembered past reflects the survey evidence in that this early migration and settlement is seen to represent many groups of different sizes, shifting from area to area as their needs required. Indeed, it would seem that the '*dispersed*' settlement pattern Spear (1978) described as emerging in the 19th century AD had its roots in an earlier pattern of settlement dynamics, with a continual need for adaptation to a multiplicity of social, economic and political interests. In this sense, there was no large-scale, 16th century AD single migration event, neither was their a clearly defined period of static, centralised settlement within the Kaya. Rather, the direct assimilation of local oral traditions with archaeological evidence would support the notion of a continuous, but dynamic long-term settlement history from the first millennium AD onwards.

5.6 Conclusion

This chapter has provided a detailed evaluation of the archaeological data collected during a systematic survey of seven regions located within the southern and central coastal hinterland of Kenya. The resulting outline of the temporal and spatial variability has been used to compare local knowledge of landscape and settlement history. This has been seen to contrast with the traditional historical model of the Mijikenda migration and settlement, yet can still maintain an interpretative framework which continues to value the alternative, but local and traditional explanations of the past. At the same time, the survey has successfully demonstrated that the study region has a rich and intensive settlement history which replaces the previously observed lacuna in archaeological knowledge.

The outline has identified and located 165 archaeological sites which encompass evidence for human occupation from the mid-Pleistocene onwards. However, our attention will now continue to focus only on the last two millennia of this settlement history. As was described above, 5 sites were selected for a detailed evaluation through excavation. These were selected to give a chronological cross-section through the material culture of the first and second millennia AD. A description of their survey and excavation, with an overview of the respective ceramic and faunal evidence is therefore now to be given.

Chapter 6 Excavation of five settlement sites in the coastal hinterland of Kenya

6.1 Excavation methodology

As was seen in Chapter 5, a total of five sites identified during the field survey were selected for excavation. Each site was chosen on the basis of the practical logistic considerations (i.e. the availability of water, agreement of landowners, and security), the apparent preservation of stratified archaeological deposits, and most important, the representivity of observed surface materials and their relative typological association. Excavation thus sought to provide a broad chronostratigraphic cross-section through the early, middle, and later iron-working, farming periods respectively. A common strategy for each site was adopted. A topographic survey with contours marked at 1m intervals was made over as large an area as possible. Each site was then overlain with a site grid at 20m by 20m intervals and a detailed collection of surface materials made. This was used to establish a surface plot of material density on a grid by grid basis, thus providing a crude spatial assessment of the settlement limits and occupation foci. Excavation trenches were then located accordingly.

Excavation was restricted to small-scale horizontal evaluation of the depth and quality of the individual site stratigraphy. This involved the definition of stratigraphic contexts, differentiated on the basis of the deposits compaction, colour, soil matrix and inclusions. Contexts were recorded using individual record forms, and differentiated on the basis of context type into layers, fills and cuts. This record was maintained during the process of excavation and written up each evening. Allocation of context numbers was carried out consecutively across the whole site, as and when encountered. To prevent confusion, no context was given the same number, even when their association could be strongly inferred. For example, both topsoil and natural subsoil were differentiated by trench through the allocation of separate context numbers.

All contexts were excavated individually, in reverse stratigraphic order. Depending on the quantity of materials recovered, between 50 and 100% of all excavated soils from each context were sieved using a 4 mm mesh. All finds were then bagged separately and labelled with their respective context number. Special finds (beads, glass, metal work, lithic artefacts and worked bone/ivory), and carbon samples were each given a specific finds/sample number and their position plotted three dimensionally. Plans (scale 1:20) were made of each trench when more than one context (layers, fills and cuts) was evident at any one time, and profiles drawn across pits and post-holes. Where possible, excavation sought to remove all contexts stratigraphically down to the natural subsoil. Once this had been achieved, section drawings (scale 1:10) were made along each of the trenches four sides. These were then used to check the stratigraphic relationships observed during excavation. By and large, individual context records, plans and sections all correlated together well. Occasionally further differentiation was recognised after excavation within individual layers, notably with the identification of minor individual lenses, which were then included as such in the drawn stratigraphic matrix. Once checked, the weighed and counted sherds of undiagnostic pottery excavated from each trench were returned, and the trench then back-filled.

6.2 Mgombani 02 (HhJw12): site description and excavation

Survey of Kenya Map Sheet 198/3 UTM zone 37M 575334 9575480
Lat. 3° 50' 36" S Long. 39° 40' 42" E
Survey Region: Jibana
Socio-Natural Zone: Dzitsoni Upland

The site of Mgombani is located 110m above sea level, either side of the main Jibana to Kambe road, some 1.5 kilometres south west of Jibana Health Centre. Immediately to the west, looms the forested slopes of Kaya Jibana, rising some 305m above sea-level; and to the east, the tributary valleys of the River Mtomkuu. The site itself is presently intensively settled by contemporary Jibana communities, and its situation, the borderland between the red sandy clays of the limestone Kambe Formation and the yellowish red shale soils of the Mtomkuu formation, must have influenced the past patterns of land use, as it still continues to do today (see figure 5.8).

Two concentrations of surface material, some 200m apart, were identified during the survey, and these have been differentiated into Mgombani site 01 and Mgombani site 02 accordingly. The site of Mgomabani 01 was initially brought to our attention by local Jibana elders. Covering some 1.9 ha, the site was seen to have some local significance as the first settlement of the Mwandaza clan, led by Mzungu Kafwani, following their movement out from Kaya Jibana.[1] Surface observation here quickly identified ceramics attributable to the early TT/TIW pottery of the middle iron-working, farming period. However, the site of Mgombani 02, some 0.9 ha in area, as well as extending the general distribution of early TT/TIW, also revealed a small sample of surface ceramics attributable to the Kwale Ware pottery of the early iron-working, farming period. The presence of both Kwale Ware and early TT/TIW on the surface together suggested this site would

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[1] Spear's informants also refer to a village called Magombani, situated at the foot of Kaya Jibana, which is recalled as being occupied by Swahili from Mombasa who traded with the local Jibana for gum copal and timber in the 19th century (Spear, T. 1978: 93).

provide a direct investigation of the transition between the early and middle iron-working, farming periods. As a result, three trenches were excavated, following a contour survey of the surrounding area (see figure 6.1). Unfortunately, the site was too densely settled to allow a systematic collection of surface materials to be undertaken. However, the trenches were located on the basis of non-systematic observations and the estimation of the depth of deposits and stratigraphic preservation as witnessed in the sections of rubbish pits and the nearby road cutting.

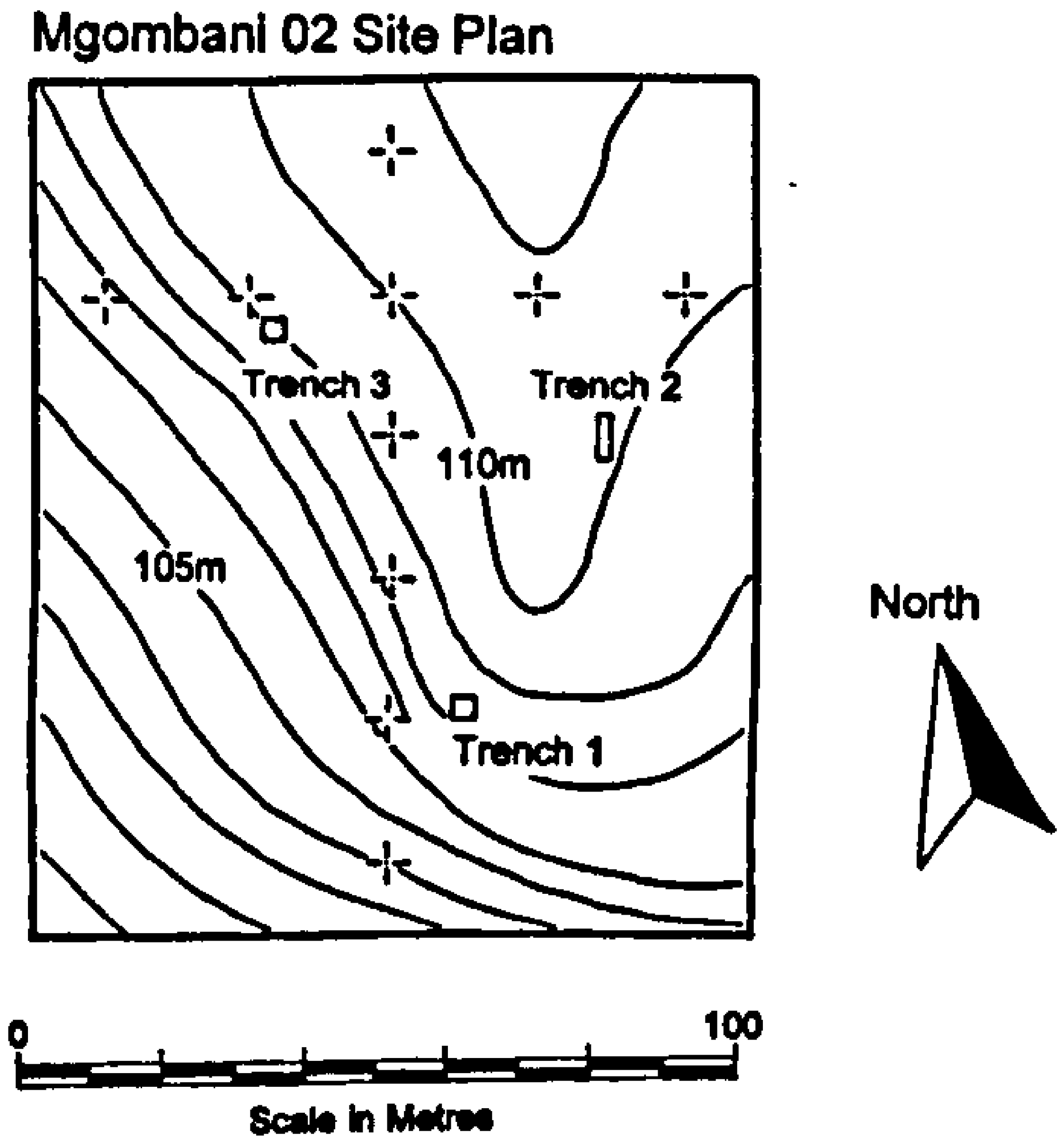

Figure 6.1 Mgombani 02 site plan

Both sites are slowly being eroded: surface weathering of the bare and regularly swept courtyards, as well as garden cultivation, rubbish pit digging and house construction are all exposing more materials and destroying stratified deposits. However, at the same time, the village households recognise the value in understanding more about their past; indeed, two occupants are elders in the local Kaya committee. It is hoped that our attempts to explain the values of preserving the material past, the inclusion of village members in the activities of excavation, and the results reported here will help in some way to sensitise local people to these sites and their archaeological importance.

6.2.1 Trench One

Trench One was located to the west of the Jibana-Kambe road, where erosion had exposed what at first appeared to be at least four stratigraphic layers rich in materials, including both Kwale Ware and TT/TIW ceramics. A 3m by 3m trench was excavated (see figure 6.2). The top layer formed a mid greyish brown silty sand (01), intermixed by modern cultivation, extending to a depth of 0.11m, and partially eroded away to the west, exposing the underlying layer below. This was a mid orange brown silty sand (04), finds from which included pottery, bone, charcoal and clay daub fragments, continuing to a depth of 0.31m. This layer was cut by a modern, circular rubbish pit (50), extending into the deposits below, some 0.40m deep and 1.39m in diameter, and filled by a mid grey brown silty sand (49). This feature fell at the edge of the trench, and was therefore only partially excavated.

Layer (04) was also partially removed by erosion to the west, revealing a mid brownish orange silty sand clay layer (08) below, extending to a depth of 0.46m. This layer was cut by two roughly circular shaped pits (45), 0.90m deep and 0.96m diameter, filled by a mid greyish orange brown silty sand (44), and (52), 0.34m deep and 0.78m diameter, filled by a mixed light to mid orange brown silty sand (51), respectively. Both pits were cut by pit (50) above, and again could only be partially excavated. In addition to ceramics, layer (08) had four pieces of iron slag.

Mgombani Trench 1 Sections

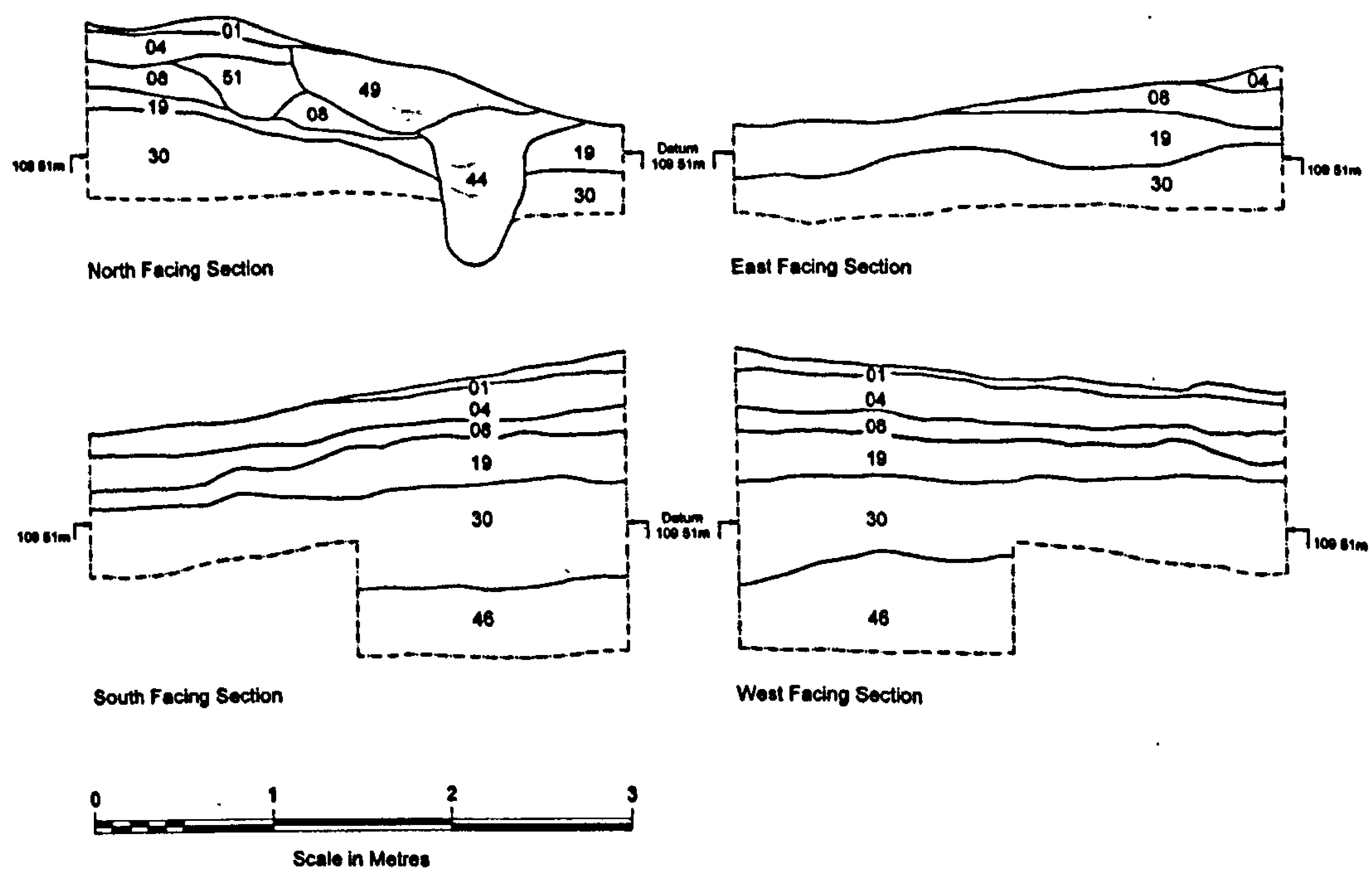

Figure 6.2 Mgombani 02 Trench One sections

The lower horizon of layer (08) was indistinct from the upper horizon of the layer below, which varied in colour from a mid- to light brownish orange sandy clay (19), and extended to a depth of 0.73m. This layer had substantially less ceramic materials, but a rounded shale pebble presumably derived from the neighbouring Mtomkuu Formation, was also collected.

Below this, layer (19) a mid orange sandy clay layer (30), reaching a depth of 1.30m was encountered. Even fewer sherds of pottery were collected from this layer, and all were located in its upper horizon. However, 18 lithic artefacts were also recovered (5 of which where of a local ultra-basic igneous stone and 13 were of local shale), suggesting an initial phase, and possibly interaction, with later stone-working communities. The lower horizon of layer (30) showed a gradual transition into the natural subsoil below (46). This was a clean mid-brownish orange sandy clay, and was excavated in the north-east corner of the trench up to a depth of 1.68m below the surface level.

6.2.2 Trench Two

Trench Two was located some 48m east of Trench One, in a central courtyard area overlooked by several occupied homesteads, on the east hand side of the Jibana to Kambe road. Heavy surface erosion had exposed a great concentration of surface materials, including the remains of a possible iron furnace and associated tuyere nose fragment with attached iron slag. This trench was placed some 10m to the west of this feature, on a slight rise where erosion was seen to be less marked. An area measuring 6m by 1.5m was excavated, orientated on a north to south line (see figure 6.3).

The top layer was a mid orange brown silty sand (02), with patches of fine grey ash, orange gravel and charcoal flecks, extending to a depth of 0.17m. This was seen to be a disturbed modern occupation surface that was partially intermixed with the upper horizon of layer (07) below.

Layer (07) was a loose, mid orange brown silty sand, flecked with fragments of charcoal, and containing a large quantity of pottery, some bone and a single piece of iron slag. A well-defined modern rubbish pit (10), partially cut this layer on the northern edge of the trench. Finds from its mid to dark grey brown silty sand fill (09) included a plastic pen top and polythene bag!

Below layer (07) was a horizon of mid orange brown silty sand (12), extending up to 0.42m deep, with frequent charcoal flecks and occasional patches of sandy gravel. This layer had by far the greatest concentration of materials and would seem to represent the sites main phase of occupation. An irregular pit (13), 0.49m deep and approximately 0.74m wide, cut through layer (12). Its disturbed fill of mid orange brown silty sand (11) with frequent flecks of charcoal also contained both pottery and bone, but only partially fell within the south western edge of the trench. A possible post-hole (18), 0.11m deep, and 0.16m in diameter was also seen to cut through this layer. However, the poor definition of edges, and loose compaction of the fill (17) suggested that this feature might well be a product of later root disturbance.

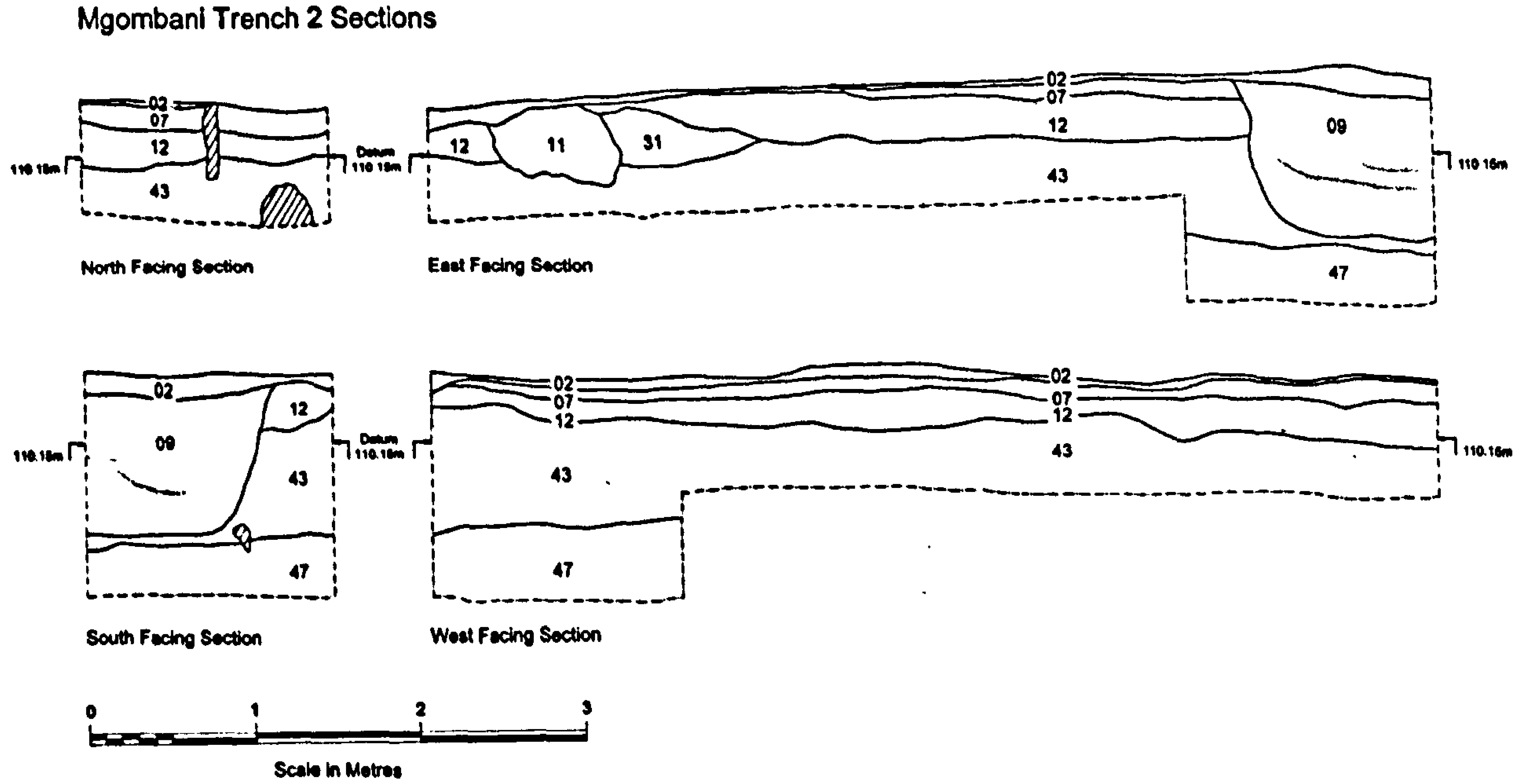

Figure 6.3 Mgombani 02 Trench Two sections

Below layer (12) was a mid orange sandy clay deposit (43), reaching a maximum depth of 1.04 m. The lower horizon of layer (43) showed a gradual transition into the natural subsoil (47) below. Only a handful of sherds were recovered from this layer. However, as with Trench One, 3 lithic artefacts (2 of local shale and 1 quartz) were collected. Between layers (12) and (43) was a restricted lens of mid orange brown silty sand (31). This was not fully recognised during the excavation and was partially excavated along with the fill (11) of pit (13). Two post-hole like features were seen to cut into layer (43), broadly running north-east to south-west and spaced 0.4m apart. Cut (40) was 0.32m deep and 0.25m diameter, with a mid orange brown silty sand fill (39) with charcoal inclusions, and cut (42) was 0.14m deep and 0.27m diameter, with a mid orange brown silty sand fill (41) with patches of clean sandy gravel.

The natural subsoil below layer (43), was a clean mid-brownish orange sandy clay (47). This was excavated to a final depth of 1.42m below the surface level, at the northern end of the trench.

6.2.3 Trench Three

Trench Three was situated some 40m to the south west of Trench One, at the rear of the village courtyard, on the east hand side of the Jibana to Kambe road. This area was overgrown with bush, and no surface material was evident. However, examination of the adjacent road cutting revealed both TT/TIW and Kwale Ware ceramics eroding from a section some 0.5m in depth. This area it was hoped, still retained those upper horizons which had been eroded away elsewhere over the site. An area 3m by 3m was laid out for excavation (see figures 6.4 and 6.5).

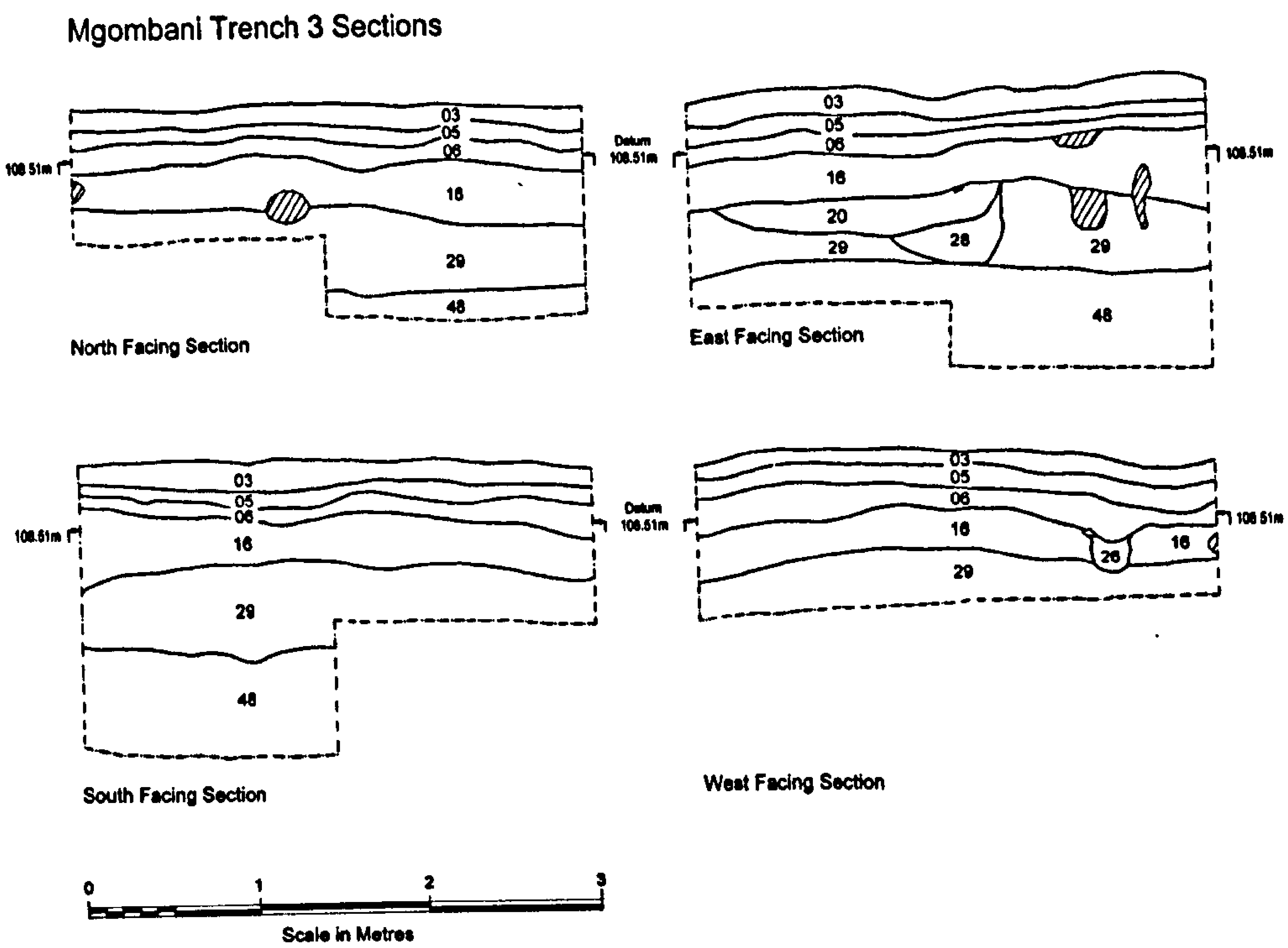

Figure 6.4 Mgombani 02 Trench Three sections

The top layer comprised a loose dark orange-brown silty sand loam (03), extending to a depth of 0.19m. Materials included ceramics, bone, 3 pieces of iron slag and a flattened fragment of iron, possibly part of a hoe. The lower horizon of this layer gradually changed to a mid orange brown silty sand (05), to a depth of 0.30m.

Below (05), a distinct sandy mid brown orange layer (06), with occasional fragments of burnt clay and charcoal, was encountered. This layer, extending to a depth of 0.46 m, had a high proportion of materials including ceramics, bone, five pieces of iron slag, a single large disc shell bead and a medium drawn glass bead, layered Indian red on a dark blue-green black core.

Layer (06) gradually merged with layer (16) below. This formed a mid brown orange silty sand, with frequent charcoal fragments and occasional patches of clean sandy gravel. Whilst both pottery and bone were collected, there was a noticeable reduction in the quantity of materials as the excavation of this layer proceeded down to a depth of 0.75 m. One piece of iron slag was collected from this layer, and a fragment of clear glass was found from the layer's lower horizon. A charcoal sample, collected at a depth of 0.56m, gave a date range of between the late 7th and early 9th centuries AD (Pta-7957, see table 6.6).

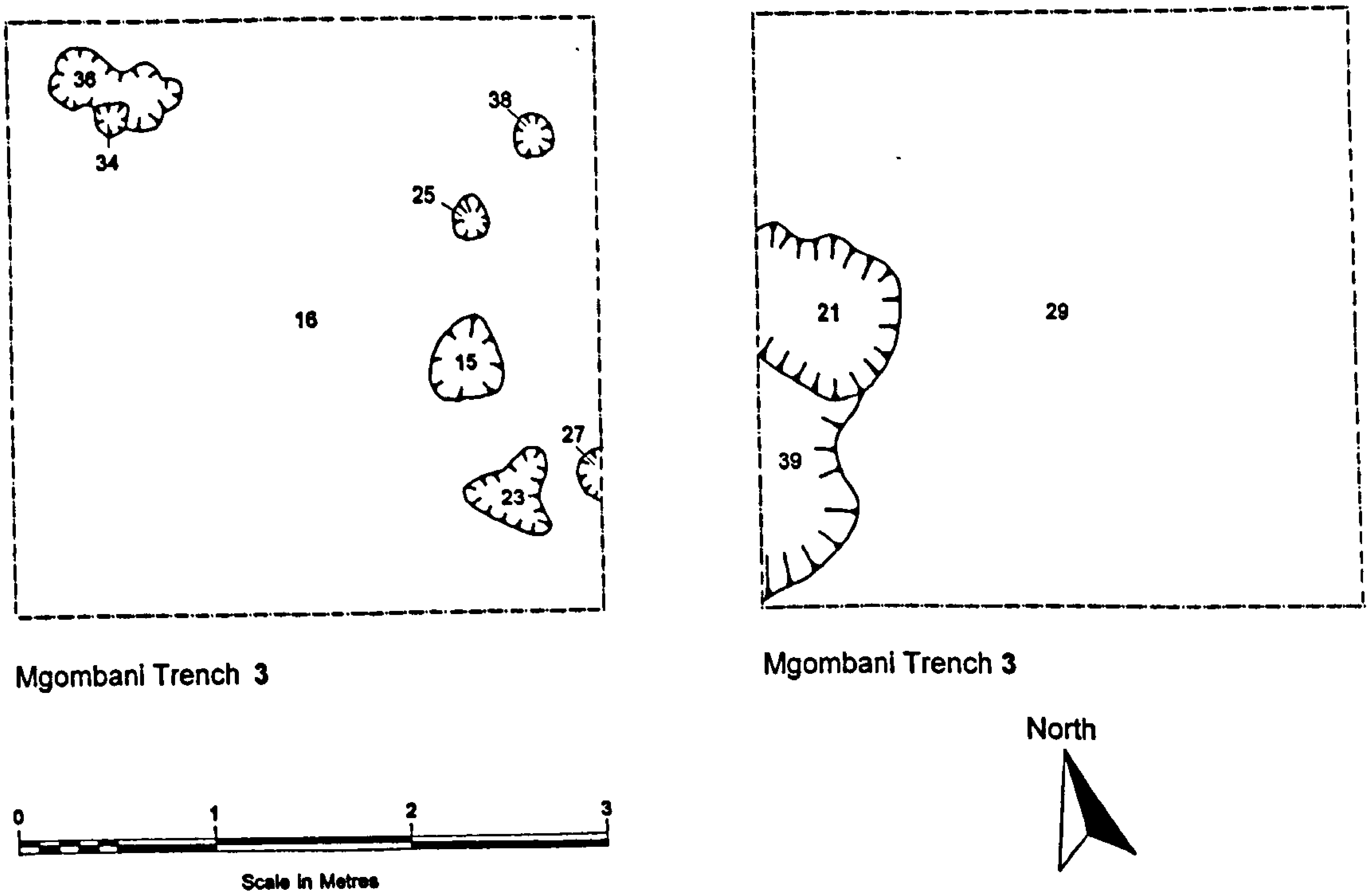

Figure 6.5 Mgombani 02 Trench Three plans

A series of five shallow post-holes (cuts 15, 23, 25, 27, and 38 respectively) were found forming a semi-circular arrangement, on the eastern edge of the trench, cutting through layer (16). Each was filled with a mid orange brown silty sand (14, 22, 24, 26, 33 and 37 respectively), and each formed an irregular circle, approximately 0.10-0.20 m deep and 0.20-0.30 m in diameter. Fill (33), contained a large shell disc bead. To the west, a further feature was encountered with a dark orange brown silty sand (35) forming the fill of an irregular shallow cut (36), 0.11 m deep and 0.65 wide. This was seen to have been some sort of natural root/animal disturbance. However, another possible post-hole (34), probably contemporary to the semi-circular arrangement of posts, was seen to cut through this, some 0.19 m deep and 0.17 m in diameter, filled with a mid grey brown silty sand intermixed with ash and charcoal (see figure 6.5).

Below layer (16) was a mid orange sandy clay layer (29), reaching a depth of 1.15 m. This layer had only a few sherds of pottery and one piece of iron slag, its lower horizon showing a gradual transition into the natural subsoil (48) below. Layer (29) was seen to have been cut by two pits. The first, and earliest, was an irregular shaped circle (21), at least 0.46 m deep and 0.76 m in diameter, filled by a dark grey brown silty sand (28) with frequent charcoal fragments and a small sample of ceramic sherds. This pit, was itself cut by a further shallow, irregular shaped circular pit (39), 0.21 m deep and 1.66 m diameter filled by a mid orange brown silty sand (20). This contained a quantity of pottery sherds and 3 pieces of iron slag. It would seem that only the base of this pit remained, presumably being disturbed by the later occupation layer (16) above. Both pits fell on the western edge of the trench, and therefore were only partially excavated. Below layer (29), the natural subsoil was a clean mid reddish orange sandy clay. This was excavated to a depth of 1.79m below the surface, in the trenches north west quadrant.

6.2.4 Finds

The excavated finds from the site of Mgombani are summarised in table 6.1 below. A total 8,240 pottery sherds were excavated from the three trenches, of which 2,413 were seen to be diagnostic and retained for further analysis. Early iron-working, farming Kwale Ware and middle iron-working, farming TT/TIW attributes were seen to be predominant throughout the collected assemblage (see figure 6.6). A discussion of these attributes is given in Chapter 7. Relatively few faunal materials were observed during the excavation, with only 222 bone fragments being collected. Whilst clearly nor a representative sample, the assemblage was seen to be characterised by domesticated livestock and small to medium sized wild mammals. A full description of these faunal materials is given in Chapter 8 (see section 8.2).

Very few finds of special interest where identified. Only 2 shell disc beads, and 1 wound oblate and layered Indian red bead were collected (see figure 6.7), as well as a single fragment of clear, presumably intrusive, glass. One iron fragment tentatively identified as being part of a hoe blade (see figure 6.7), and a total 18 pieces of iron-slag, with an overall weight of 1,480 gm, all attest to the on-site working of iron. In addition, 22 lithic artefacts were collected from the lower horizons of trenches one and two. These included locally available materials: shale, ultra-basic igneous and quartz stones (see figures 6.7 and 6.8).

Mgombanl 02		Pottery		Iron		Beads		Glass	Stone		Bone
Trench	Context	a	b	c	d	e	f	g	h	I	J
1	01	67	167								
	04	158	499								3
	44	1	6								
	08	148	361	4							
	19	38	152						1		
	30	11	25							18	
2	02	144	183								2
	07	350	621	1							5
	09	19	43								
	11	94	179								2
	17	1	1								
	12	665	1124								13
	31	8	25								
	43	3	9							3	
3	03	21	150	3	1						16
	05	14	70								43
	06	319	1267	5		1	1				137
	14	1	9								
	35	10	35								
	16	238	556	1				1			1
	20	70	240	3							
	22		2								
	33		4			1					
	28	5	28								
	29	28	71	1							
	Total	2413	5827	18	1	2	1	1	1	22	222

Table 6.1 List of materials collected from Mgombanl 02 by trench and context

Notes: a diagnostic pottery, b non-diagnostic pottery, c iron-slag, d iron fragment, e shell bead (disc), f glass bead (layered Indian red on drk blue green core), g glass (clear), h rounded stone pebble, I worked lithic artefacts, J bone

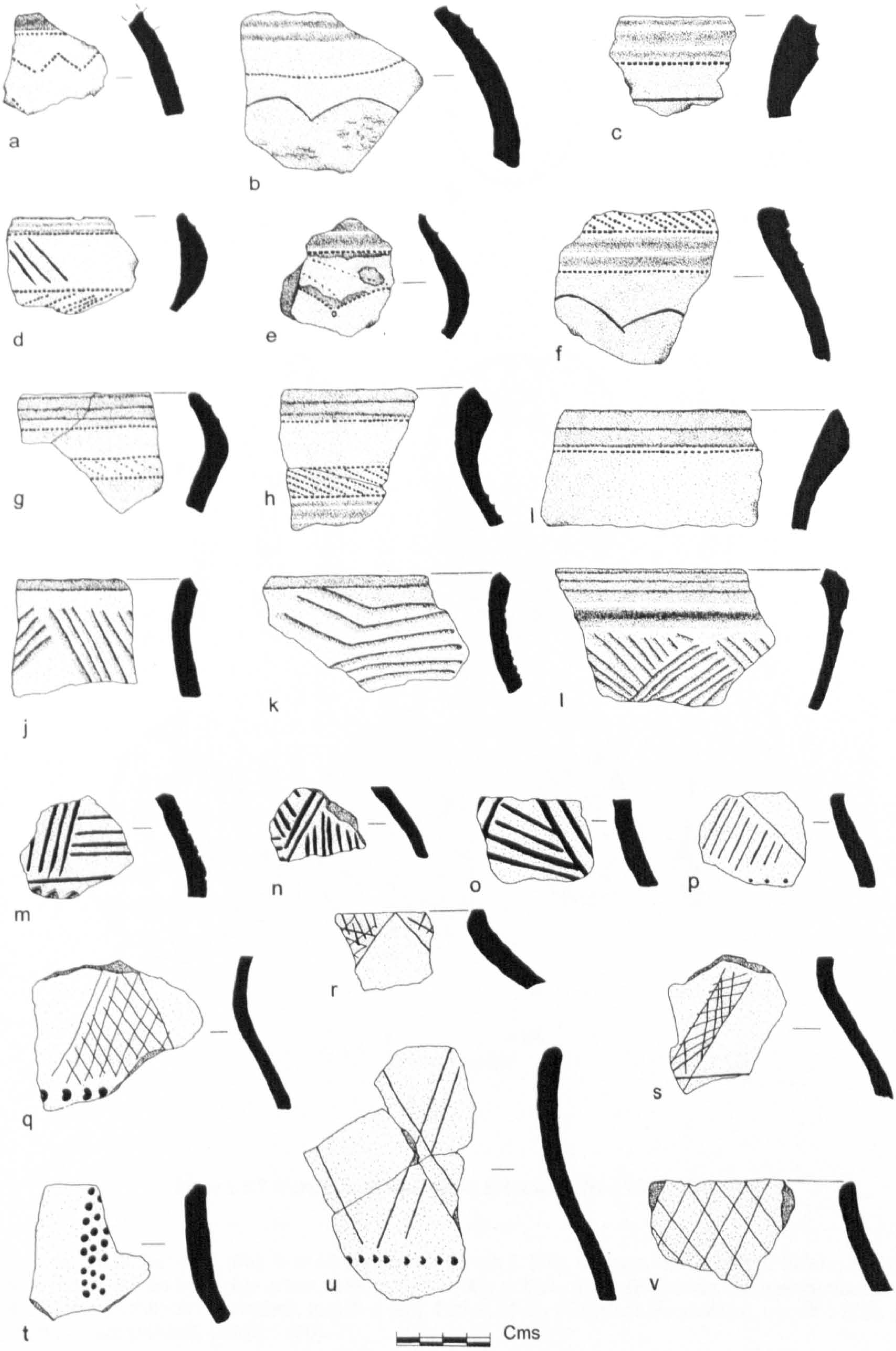

Figure 6.6 Selected pottery sherds from Mgombani 02

a-i Kwale Ware; **j-0** transitional Kwale Ware to early TT/TIW; **p-v** early TT/TIW

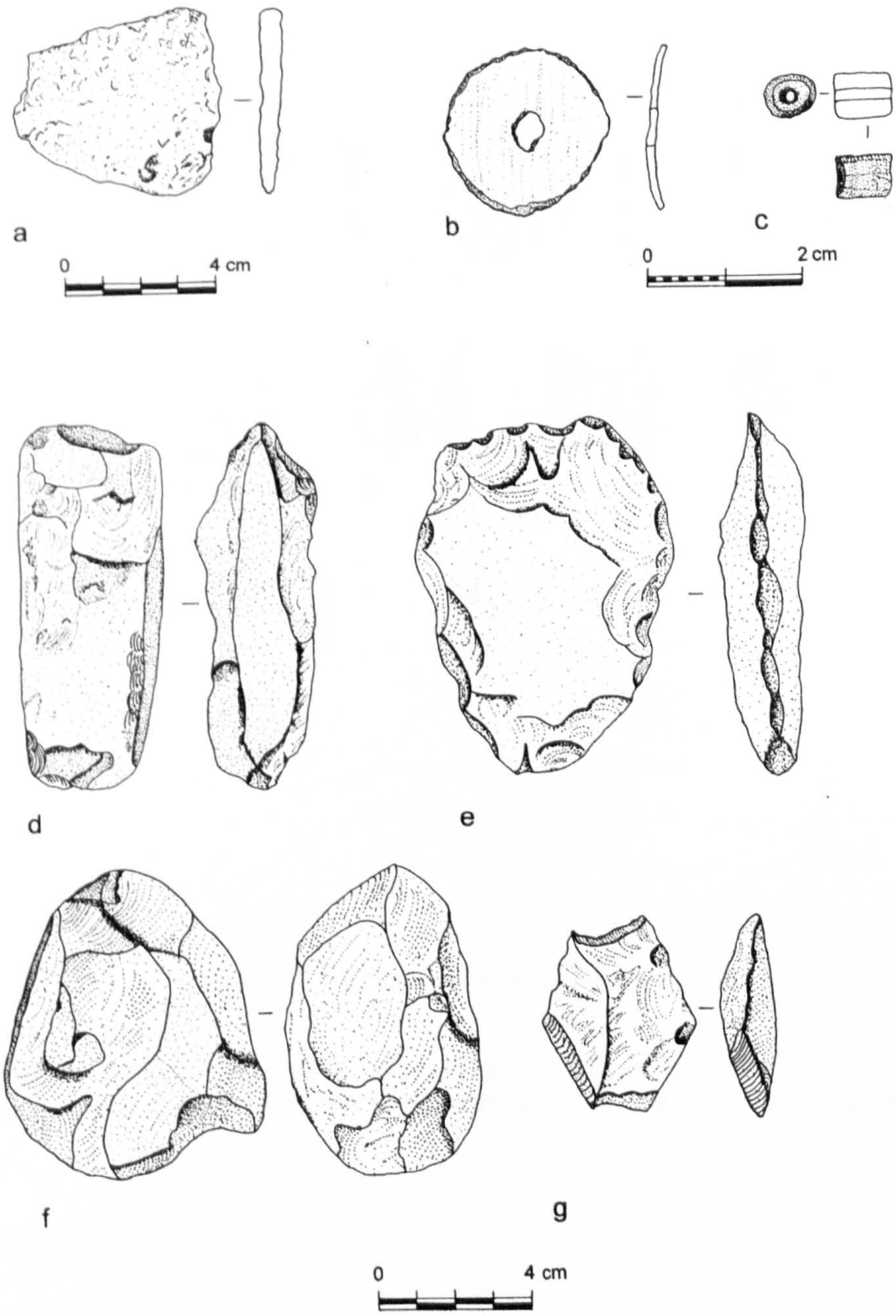

Figure 6.7 Iron, beads and lithic artefacts from Mgombani 02

a iron hoe blade, trench 3 (03); **b** shell disc bead, trench 3 (06); **c** glass bead, wound oblate, polychrome layered Indian red on dark blue green core, trench 3 (06); **d** lithic, shale (Fishbeds Formation), trench 2 (43); **e** lithic, shale (Fishbeds Formation), trench 2 (43); **f** lithic, shale (Fishbeds Formation), trench 1 (19); **g** lithic, local ultra-basic igneous, trench 1 (30).

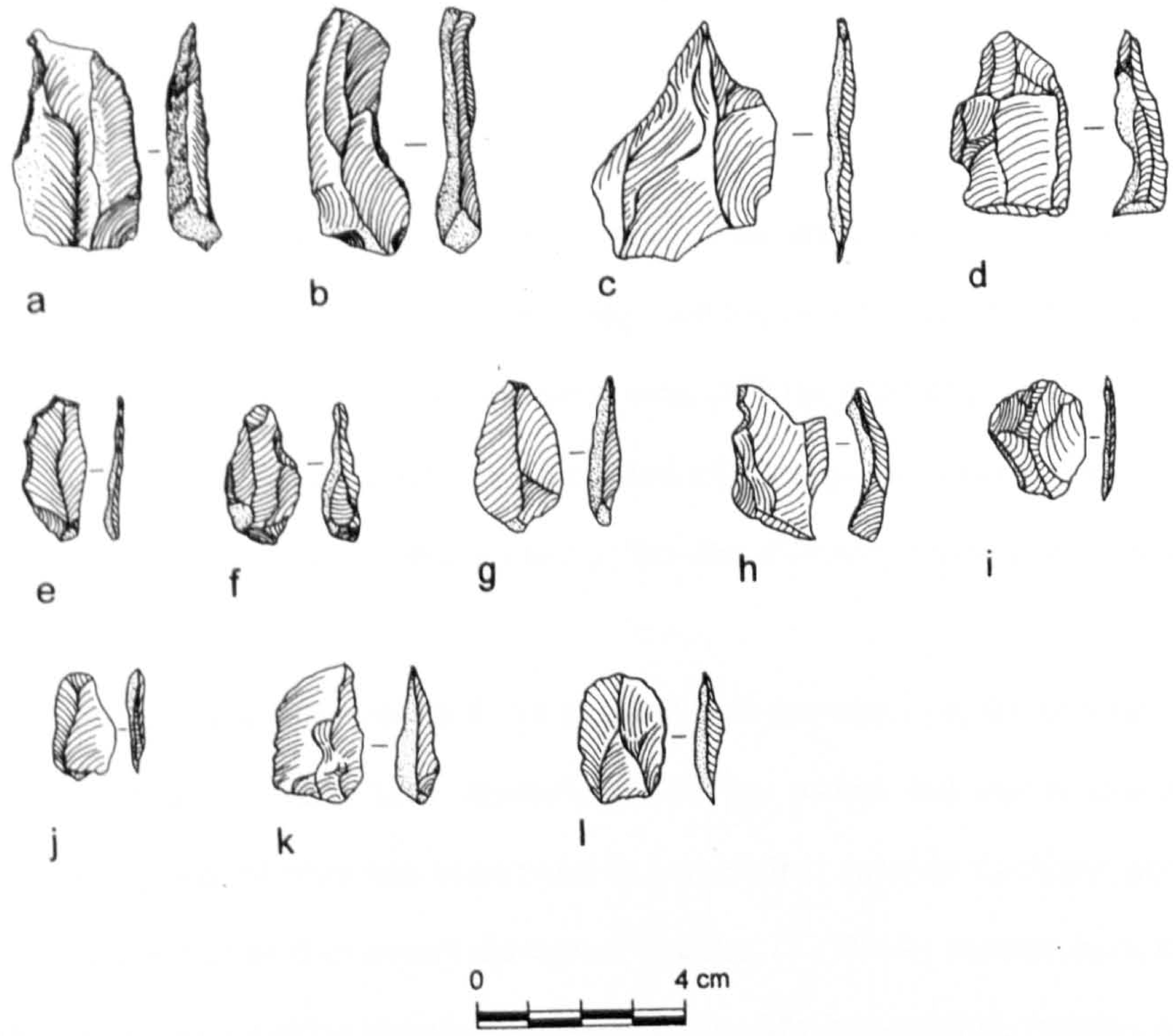

Figure 6.8 Lithic artefacts from Mgombani 02

a-c lithic, shale, trench 1 (30); **d** lithic, local ultra basic igneous, trench 1 (30); **e-h** lithic, shale, trench 1 (30); **i** lithic, quartz, trench 2 (43); **j** lithic, local ultra basic igneous, trench 1 (30); **k-l** lithic, shale, trench 1 (30).

6.2.5 Summary

An overview of the site stratigraphy and excavated finds from the three trenches allows us to reconstruct a broad site history:

- an initial occupation by stone-working communities. This might be seen to either predate, or be coterminous to, the first appearance of iron-working, farming communities on the site. The intermixture of a very few sherds of Kwale Ware at the same level as lithic artefacts, and the identification of iron slag at the base of Trench Three, might be interpreted either way. A similar pattern, with lithic artefacts intermixed with TT/TIW ceramics is also evident at the site of Chombo (see section 6.3 below)

- Two main occupation layers, (contexts 8, 12 and 16) and (contexts 04, 07 and 06) respectively, with associated rubbish pits and post built structures. Both are associated with Kwale Ware and TT/TIW sherds. The occurrence of what has been seen as two distinct ceramic traditions occurring together in stratified deposits is further discussed below (see Chapter 7). Briefly summarised, it would seem that the data reflects a fluid transition between the early and middle iron-working farming periods.

- The absence of ceramics with uniquely later iron-working, farming attributes would suggest that the site was finally abandoned during the middle iron-working, farming period. The final phase, marked by the disturbed upper most horizons, is therefore seen to represent the later reoccupation of the area by the contemporary Jibana inhabitants, perhaps following the sites settlement by the Mwandaza clan as recorded by local oral histories.

6.3 Chombo 01 (HIJv10): site description and excavation

Survey of Kenya Map Sheet: 200/2 UTM zone 37M 554303 9543058
Lat. 4° 08' 02" S Long. 39° 29' 19" E
Survey region: Kwale
Socio-natural zone: Kwale Upland

The site of Chombo lies some 140m above sea level, below the steep incline of the Shimba Hills, and along the valley floor of the River Chombo, a tributary stream of the Cha Simba (Pemba) River (see figure 4.10). This is fed by a spring at the foot of the Shimba Hills, the forested surroundings of which is held to be sacred by the local Digo communities. The site had already been recorded by Dr. George Abungu, following non-systematic collection of surface materials, including pottery sherds with both Kwale Ware (notably bevelled rims) and early TT/TIW affinities (Abungu, G. 1996 *pers. com.*). Abungu had identified a number of settlement foci along both sides of the river valley, and this was confirmed during my own survey (Chombo 01 to Chombo 03 respectively). However, the work outlined here focused on Chombo 01, where two closely spaced surface concentrations (labelled areas A and B respectively), approximately 2.2 ha in area, were located along the streams eastern bank. A contour survey and systematic surface collection was made, the results of which were used to identify potential areas for excavation. In all a total five trenches were excavated (see figure 6.9).

Interviews were conducted with local Digo elders, during which the site was frequently referred to as being settled by the 'Chombo' a Digo matriclan which moved to Chombo from Kaya Kwale[2]. It was also said that members of this group later moved further north to settle at Mteza (see section 6.4 below). Excavations undertaken at Kaya Kwale by Mutoro (1987:190-7198), gave a good stratigraphic sequence, up to 1.80m in depth, with the presence of TT/TIW ceramics suggesting a broad date of occupation between the 9th and 15th centuries AD (Mutoro, H. 1994/5: 257-259). However, Mutoro failed to identify any sherds of Kwale Ware, despite the Kaya's proximity to the early iron-working, farming Kwale type-site.

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[2] Note that Spear (1978: 56, Table III), lists the Chombo matriclan as being Duruma. However, no such reference was made by the Duruma elders interviewed during 1996.

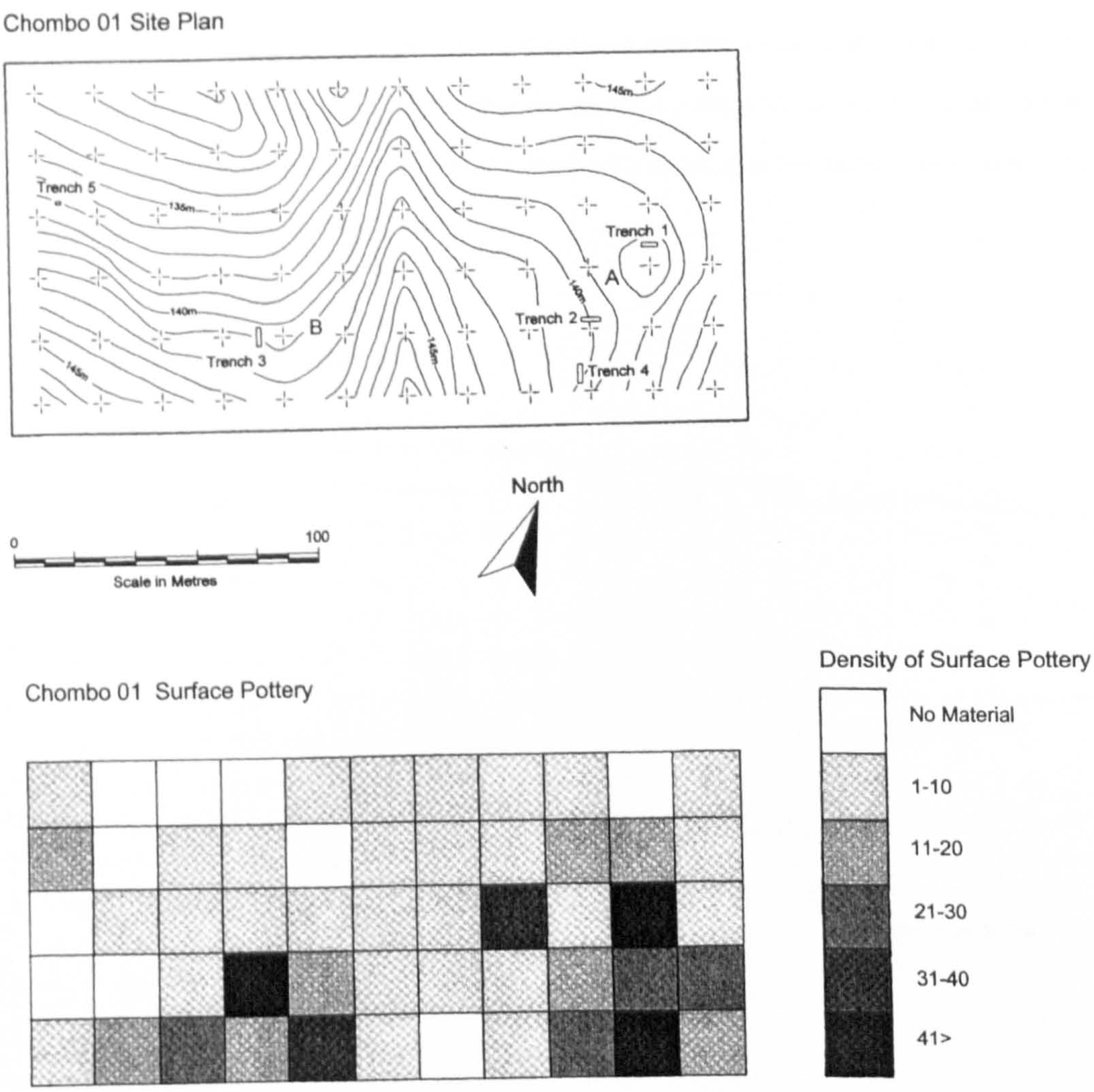


Figure 6.9 Chombo 01 site plan and distribution of surface pottery

6.3.1 Trench One

At the north eastern edge of area A, a circular mound, heavily overgrown with scrub, and up to 1.41m in height and approximately 15m in diameter, was observed. Local informants had no explanation for this mound, although they believed that the area just to the east had been part of a burial ground. A concentration of surface materials were seen to be eroding from a track, cutting the mounds north-western edge. It was therefore suspected that the mound might have originally been a large rubbish midden. For this reason a trench, 5m by 1.5m was laid across the mound's northern side (see figure 6.10). The top layer was seen to be a mid olive grey sandy silt (01), with frequent charcoal flecks, extending to a depth of 0.17m. However, finds from this layer were disappointingly few, and included only a small handful of mainly undecorated pottery sherds. Below this topsoil, a mid olive brown silty sand (02) was reached, continuing to a depth of 0.48m. No charcoal was present in this layer, and again very few materials were recovered. The lower horizon of this layer gradually changed to a mid orange brown silty sand (03) with frequent sub-angular stones, up to a depth of 0.71m, where it merged with the clean, light olive natural sub-soil below. This was excavated to a depth of 1.77m at the trenches western end, before finally being abandoned. A total of 6 lithic artefacts (2 of local shale, 4 of a local ultra-basic igneous stone) were recovered from layer (03) and at the interface of layer (04).

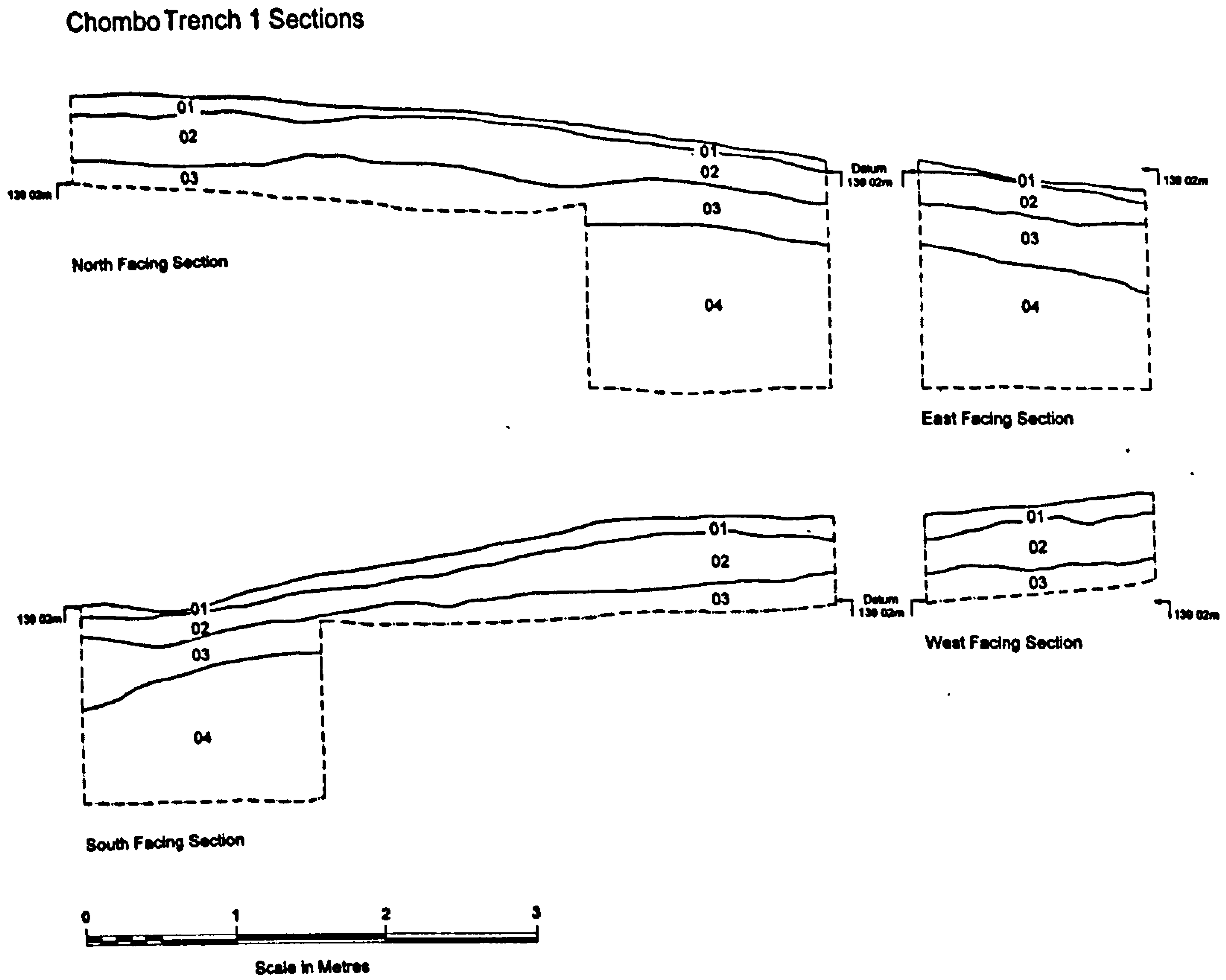


Figure 6.10 Chombo 01 Trench One sections

The overall density of materials recovered from Trench One suggested that our belief that the mound represented a midden was misfounded. Instead the mound was seen to be a natural feature of the site topography. However, the lack of occupation evidence on the mound itself, the traditional burial around its eastern side, and the visible surface evidence for intensive settlement to its west and south perhaps suggest that the mound acted as a natural foci for ritual/social activities, in the same way as the central *moro* of a Kaya still does today.

6.3.2 Trench Two

Trench Two was located some 30 m south west of Trench One, to test the stratified occupation deposits of area A. An area 6m by 1.5m was opened up (see figures 6.11 and 6.12). The top layer was seen to be a mid grey black sandy silt soil (05) with fragments of charcoal, pottery and bone. Seasonal cultivation of the top soil had partially intermingled this layer, up to a depth of 0.19m, with that of the mid olive grey sandy silt (06) layer below. A large quantity of materials, including pottery, bone, and 3 pieces of iron slag, were recovered from this layer. Between 0.28 and 0.53m the soil changed to a lighter olive grey sandy silt. This was differentiated as layer (09). Here the quantity of finds were seen to increase. These included pottery, bone, 1 piece of iron slag, 2 beads (one carnelian, the other a drawn light green glass), and 2 lithic artefacts (both local shale stone).

Below layer (09), was a light olive yellow silty sand (15), extending to a depth of 0.78m, containing both charcoal, house daub fragments, pottery, bone, 3 pieces of iron slag, and a single piece of quartz stone. As this layer was excavated, a dense concentration of house daub, pottery and charcoal was seen to lie in a restricted lens (17) some 0.21m thick. This was originally believed to represent a cobbled floor surface (see figure 6.12). However, the materials were not particularly compacted and its interpretation remains open, the excavated area only exposing the layer's western edge.

Layer (17) was seen to sit within a slight hollow on the surface of layer (19) below. This was a mid greyish brown silty sand extending to a depth of 0.98m, and which overlay the clean mid yellow orange sandy clay natural subsoil (43) below. Whilst the overall quantity of finds recovered decreased in this layer, a total 6 pieces of iron slag were collected. A 'Y' shaped feature (33), roughly orientated north to south, was cut into the natural sub-soil below layer (19). Each channel of the 'Y' was about 0.10m deep and 0.20m wide, filled with a mid greyish brown silty sand containing both pottery, bone, charcoal, and 3 pieces of iron slag. Again this feature was of an unclear function, and no informed interpretation could be made (see figure 6.12). In addition, 3 post-hole like features (cuts 36, 38 and 40), approximately 0.15-0.20m in depth and 0.10m in diameter, were seen to cut into the natural subsoil at the trench's western corner. Each was filled with the same mid greyish brown silty sand (fills 35, 37 and 39 respectively) and it would be fair to argue that these features should be viewed as contemporary to one another. Layer (43) was excavated to a final depth of 1.21m to ensure that evidence for occupation did not continue below.

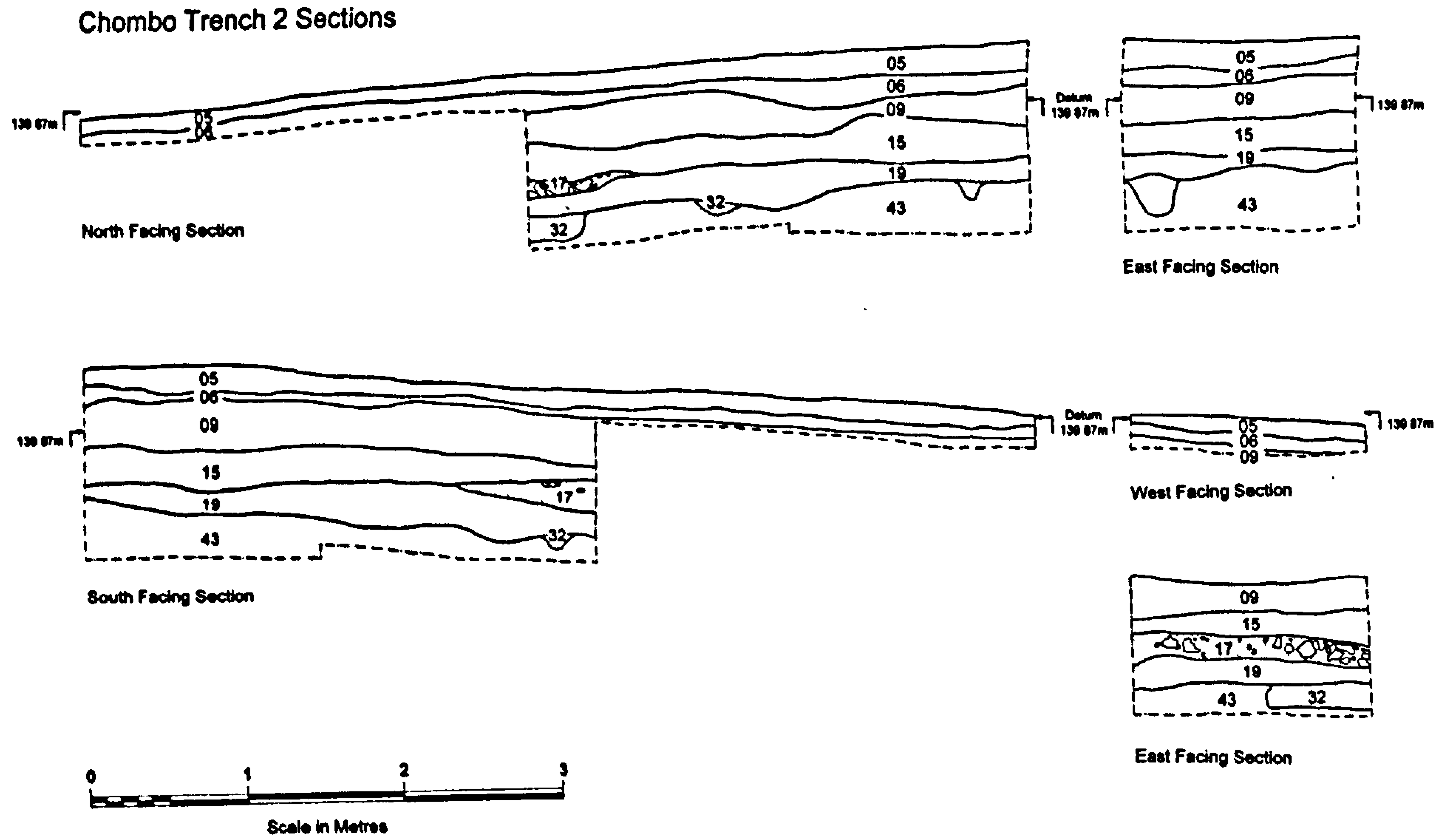


Figure 6.11 Chombo 01 Trench Two sections

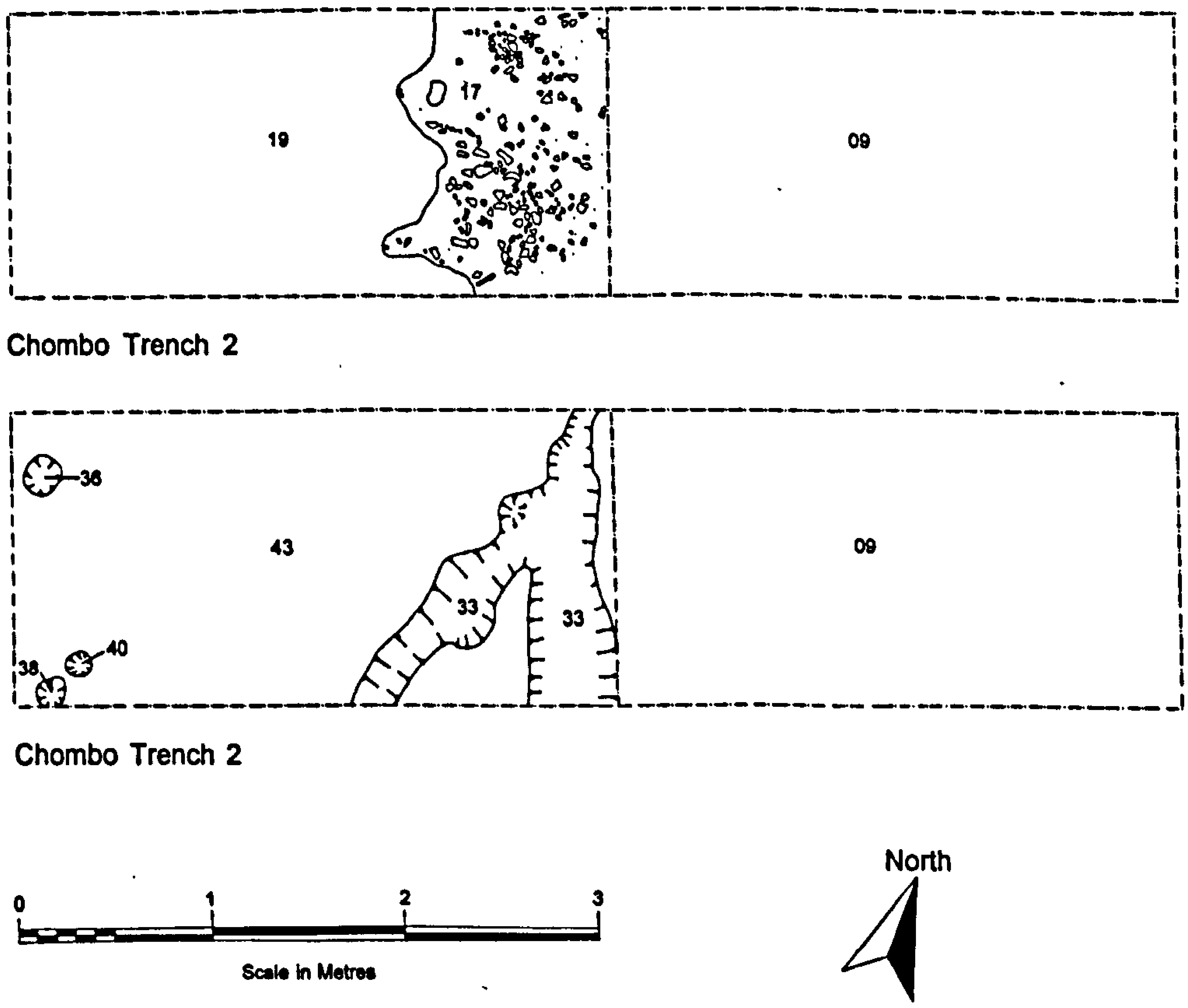


Figure 6.12 Chombo 01 Trench Two plans

6.3.3 Trench Three

Trench Three, measuring 6m by 1.5m, was located some 110m west of Trench Two, in the area designated surface concentration B. Here the topsoil was seen to be a dark brown black silty sand (07), extending to a depth of 0.09m, the lower horizon of which was seen to intermingle with the mid grey brown silty sand layer (08), which extended to a depth of 0.20m below (see figure 6.13). Both layers were seen to have been disturbed by previous cultivation; both contained pottery sherds and very fragmented bone.

Below these disturbed horizons, a mid yellow grey to orange brown silty sand layer (12) was encountered. This extended to a depth of 0.44m and appeared to represent the main period of occupation in this area. A large quantity of pottery was collected, but bone seemed relatively scarce and poorly preserved. In addition, sitting on this surface was an area of burning (10), roughly 0.15m thick and 1.35m in width, and which seemed to include well preserved and charred seeds. A measured sample was taken to Fort Jesus Museum, Mombasa for future flotation and identification.

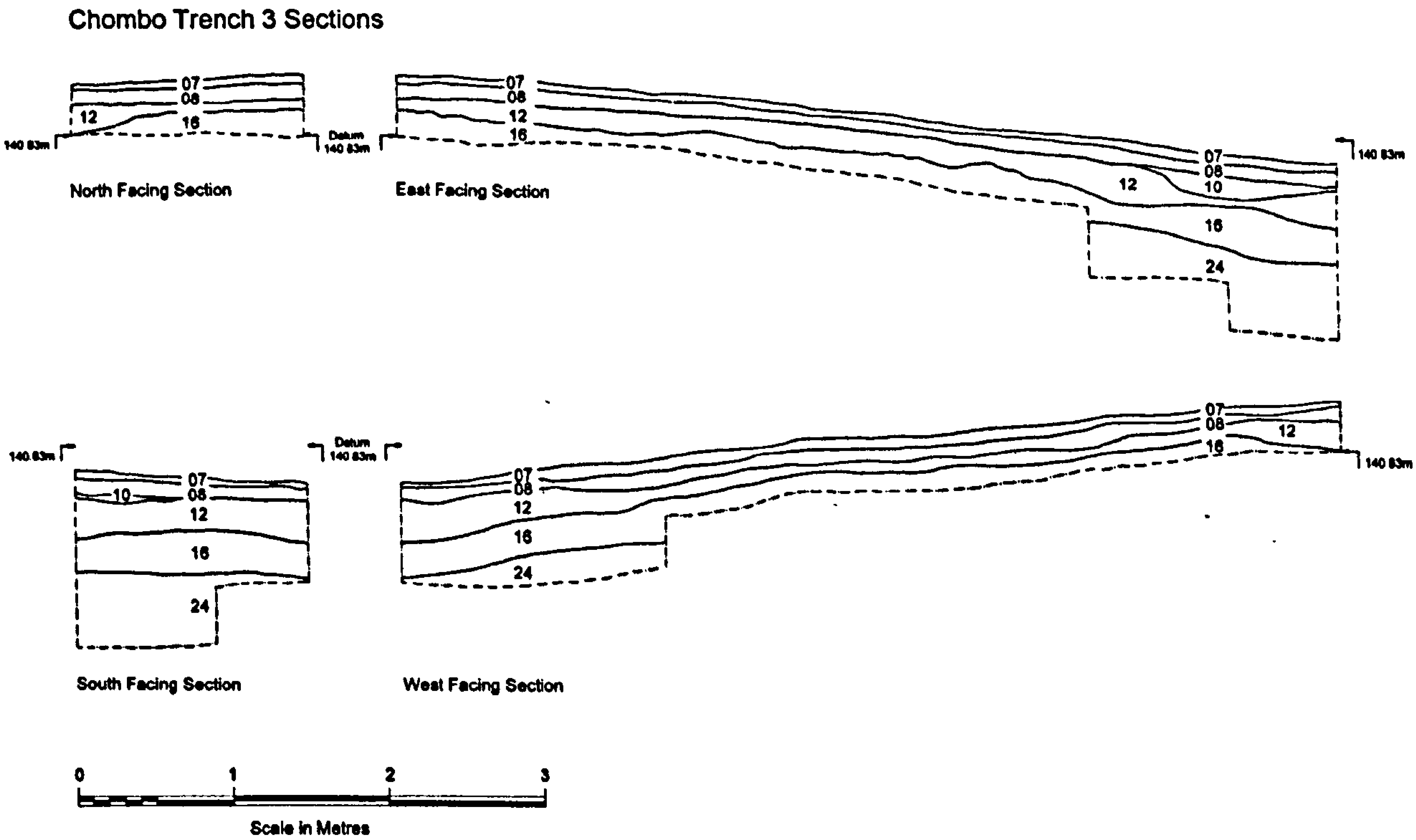


Figure 6.23 Chombo 01 Trench Three sections

Layer (12) was seen to overlie a mid yellow grey sandy clay layer (16), which continued to a depth of 0.67 m. This was seen to be a disturbed upper horizon of the natural subsoil, layer (24) below. No finds were recovered from this layer, but occasional flecks of charcoal were visible during its excavation, suggesting that their had been some form of clearance/cultivation activity in this area prior to its settlement. The clean natural subsoil, a mid yellow orange sandy clay, was excavated to a depth of 1.13m before the excavation was finally abandoned.

6.3.4 Trench Four

Trench Four, measuring 6m by 1.5m, was located back in the area of surface concentration A, some 14m south of Trench Two. Here the topsoil was seen to be the same mid grey black silt soil (11), extending to a depth of 0.28m (see figure 6.14). However, a far greater quantity of materials were collected, including pottery, bone, a single piece of iron slag and importantly, a fragment of tuyere suggesting the on-site smelting of iron. Below layer (11), and continuing to a depth of 0.62m, was a well-defined layer, made up of a mid olive grey sandy silt (13) with frequent flecks of charcoal, and an even greater quantity of pottery and bone. In addition, a single piece of iron slag, a carnelian bead, cowrie shells, and four lithic artefacts (all local shale stone) were recovered.

Below layer (13), a mid olive grey silty sand, differentiated by the frequent occurrence of sandy patches, was excavated to a depth of 0.83m. The quantity of pottery and bone, whilst still high, was significantly less than that observed in layer (13) above. Special finds included an iron nail, 5 pieces of iron slag, a carnelian bead, a plain ivory 'box', and 3 lithic artefacts (2 of local shale, and 1 of sandstone deriving from the coastal Mariakani Formation). The lower horizon of this layer (14) was seen to gradually change to a mid olive yellow silty sand. Whilst there was no clear distinction between horizons, it was decided that this change should be noted with the allocation of a new context/layer number (18). This proved to be satisfactory, as this layer continued down to a depth of 1.18m. Finds continued to be frequent, of special note is the large quantity of iron slag (22 pieces) recovered from this layer, in addition to a light yellow-green medium drawn glass bead, 2 lithic artefacts (both local shale) and a lump of gum copal. A charcoal sample collected from this layer at a depth of 0.65m, gave a radiocarbon date range of between the late 8^{th} and 10^{th} centuries AD (Pta-7978, see table 6.6)

Between layer (18) and the natural subsoil was a transitional horizon, marked by a light orange yellow silty sand (20). Only a small quantity of pottery sherds and fragmented bone was recovered from this layer. However, three post-hole like features (cuts 27, 29, and 31), measuring approximately 0.10m in depth and 0.15m in diameter, were cut into this layer at the trench's northern end, spaced regularly at 0.35m intervals. Each was filled with a mid orange brown silty sand fill (26, 28 and 30 respectively). No floor surface was associated with this structure and the restricted size of this excavation means that its function remains unclear. Below layer (20), a clean mid yellow orange sandy clay layer (42) was excavated to a depth of

1.23m. Similarity with layer (43) from Trench Two, and the lack of any finds, suggested that this layer marked the natural subsoil.

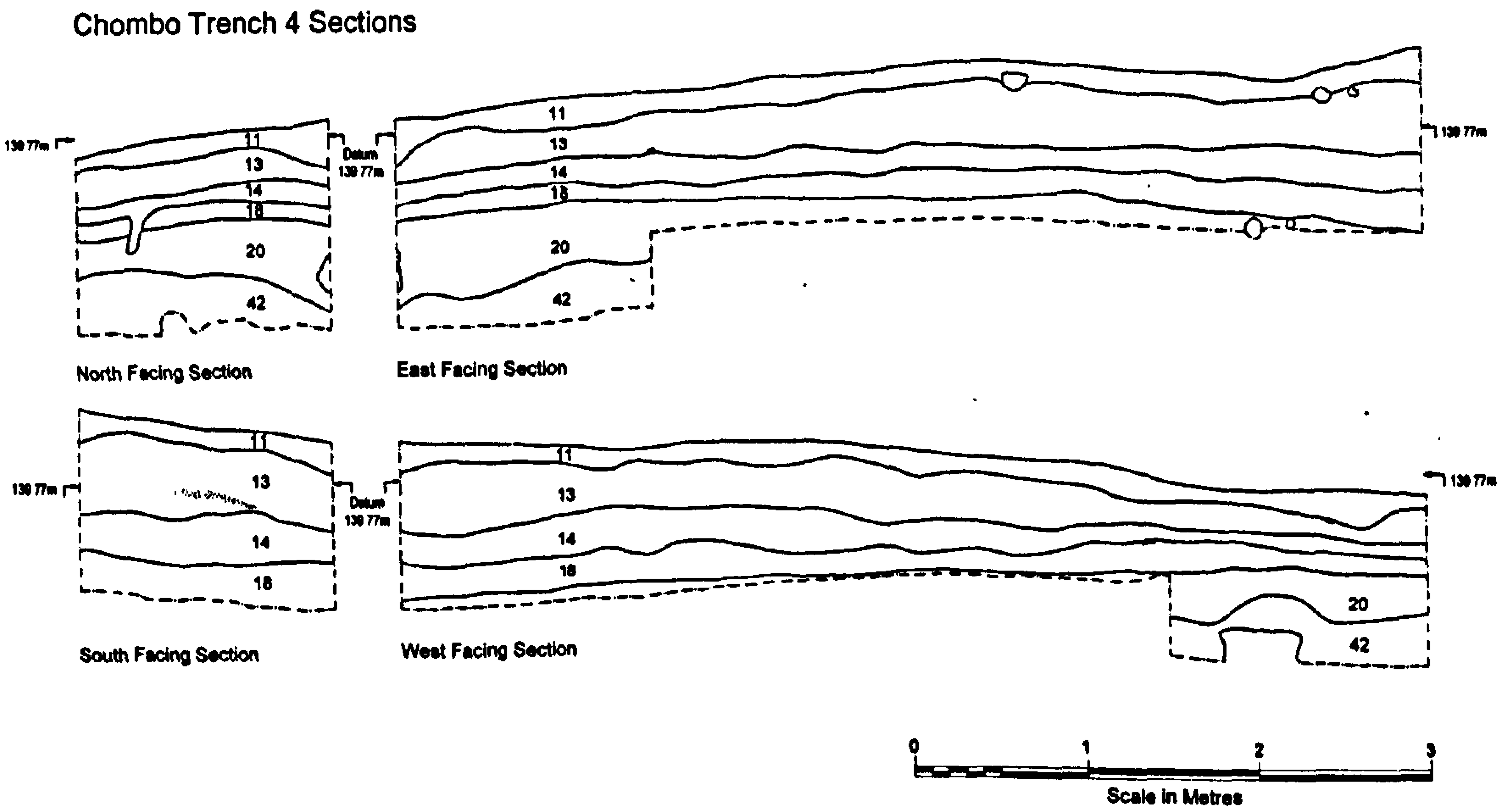


Figure 6.14 Chombo Trench Four sections

6.3.5 Trench Five

During surface survey a gully, leading from the hillside west of area B, and running down towards Chombo stream, was seen to have pottery eroding from its west facing slope. It was initially believed that these materials represented layers of occupation which had been cut through by excessive surface run-off of water as a result of hill side cultivation. A 2m by 1m trench was opened to explore this hypothesis. However, whilst it was evident that the gully was a creation of surface erosion, it soon became clear that the materials did not represent stratified occupation layers, but instead, were the washed down deposits from the hill slope above. A total of five different layers were identified (see figure 6.15). The top layer was a light to mid yellow sand with lenses of mid olive grey silt (21), extending to a depth of 0.32m. Below this, a dark greyish black silty sand (22), extending to a depth of 0.54m, overlay a mid olive grey silty sand (23) which, following the 'V' shaped cut of the gully, reached a depth of 1.17m. Below this, a mid greyish brown silty sand (25), was seen to continue down to 1.22m, before reaching a mid yellowish grey silty sand (34). This was excavated to a depth of 1.55m, but not fully bottomed, before the excavation was abandoned. The gully itself cut through a clean, mid yellow orange sandy clay sub-soil (44). Pottery was recovered from all the layers, within the gully cut, with the exception of (34), which should perhaps be seen as pre-settlement gully fill. In addition a stone pebble (igneous, possibly metamorphic) was found in layer (25). A proportional decrease in finds as the depth of excavation increased, and the absence of finds in layer (34) would suggest that the gully is not a modern erosional feature as was first suspected, but has always been part of the site's natural topography, at least since its first settlement in the later first millennium AD.

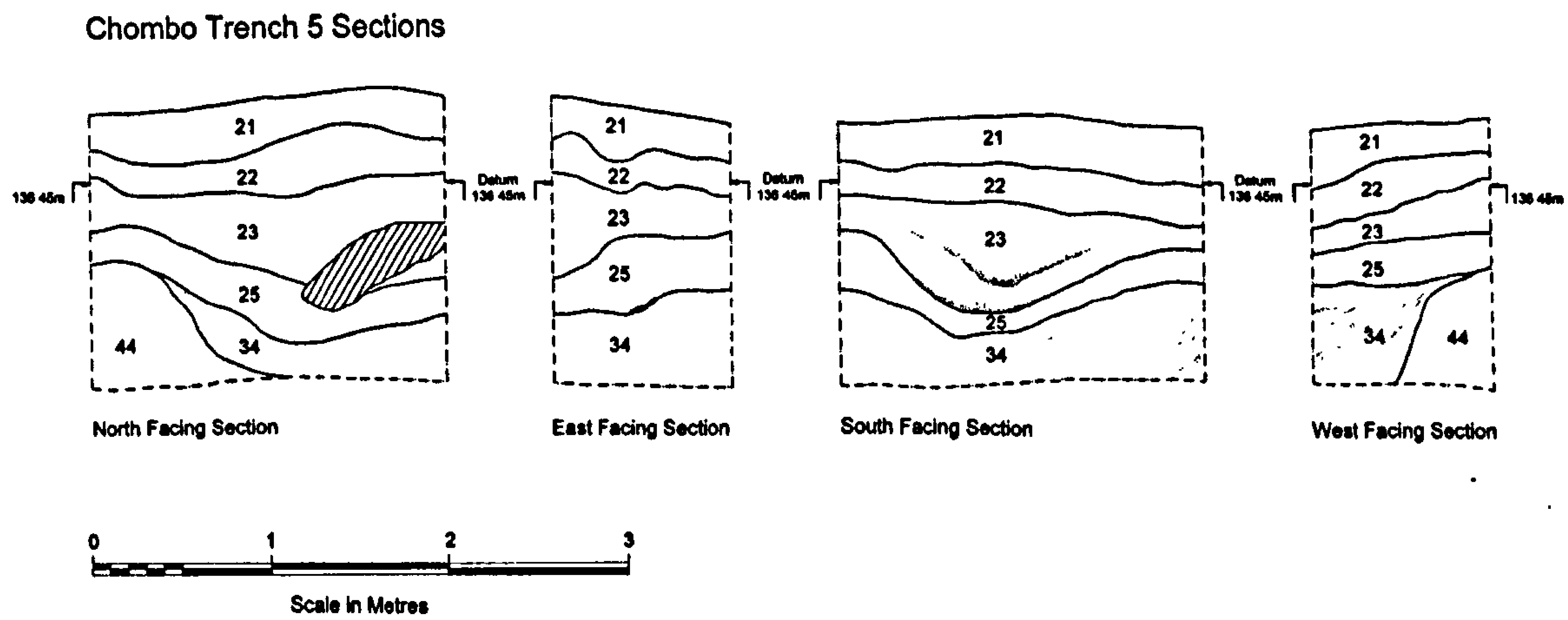


Figure 6.15 Chombo Trench Five sections

6.3.6 Finds

The excavated finds from the site of Chombo are summarised in table 6.2 below. A total of 8,499 pottery sherds were excavated from the five trenches, 2,680 of which were seen to be diagnostic and retained for further analysis. Local middle iron-working, farming TT/TIW attributes were seen to predominate the collected assemblage, but elements of the early iron-working, farming Kwale Ware were also present, especially in the earlier contexts (see figure 6.16 and Chapter 7). A fair sized sample of faunal materials, 2,340 bone fragments in all, were also excavated. This assemblage, whilst including some domesticated species, is mainly composed of wild fauna from a varied range of land and marine habitats (see section 8.3).

A total of 47 pieces of iron slag, with a total weight of 940 gm, and a single fragment of clay tuyere was collected from Trenches Two and Four, suggesting that iron-working was restricted to the sites eastern area only. An iron nail was collected from Trench Four. Other special finds included a single shell disc bead, 3 carnelian beads, and 1 wound and 1 drawn glass bead (light green and greenish yellow respectively), and a plain carved ivory 'box' (see figure 6.17). Gum copal and cowrie shells further emphasised trading connections.

A total of 20 lithic artefacts were collected from the excavated trenches. These were found to be of locally available materials, shale, quartz, ultra-basic igneous, a single possible metamorphic stone, and Mariakani Formation sandstone (see figure 618). With the exception of Trench One, where lithic artefacts were seen to underlie ceramic bearing deposits, the majority of lithic artefacts were found to be used intermittently throughout the sites excavated occupation history. This would either suggest that this iron-working, farming community either themselves used, or had close relationships with communities that used stone-working technologies.

Chombo 01		Pottery		Iron			Beads				Stone		Shell/Gum/Ivory/Bone			
Trench	Context	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
1	01	3	26													8
	02	29	57													29
	03	21	34								6					33
2	05	11	29													2
	06	105	255	3												29
	09	122	383	1				1		1	2					88
	15	17	58	3							1					36
	17	269	432								1					1
	19	12	21	6												56
	32	5	14	3			1									6
	35		3	2												
3	07	76	221													
	08	28	159													
	10	9	12													11
	12	67	369													
4	11	361	767	1	1											239
	13	817	1711	1						1	4		5			1065
	14	508	751	5		1				1	3				1	562
	18	154	299	22					1		2			1		167
5	21	1	7													
	22	38	111													
	23	24	84													
	25	3	16									1				
	Total	2680	5819	47	1	1	1	1	1	3	19	1	5	1	1	2340

Table 6.2 List of materials collected from Chombo 01 by trench and context

Notes: **a** diagnostic pottery, **b** non-diagnostic pottery, **c** iron slag, **d** tuyere, **e** iron nail, **f** shell bead (disc), **g** glass bead (short drawn, light green), **h** glass bead (wound oblate, light greenish yellow), **i** carnelian bead (spheroid), **j** worked lithic artefact, **k** rounded stone pebble, **l** cowrie shells, **m** gum copal, **n** worked ivory, **o** bone

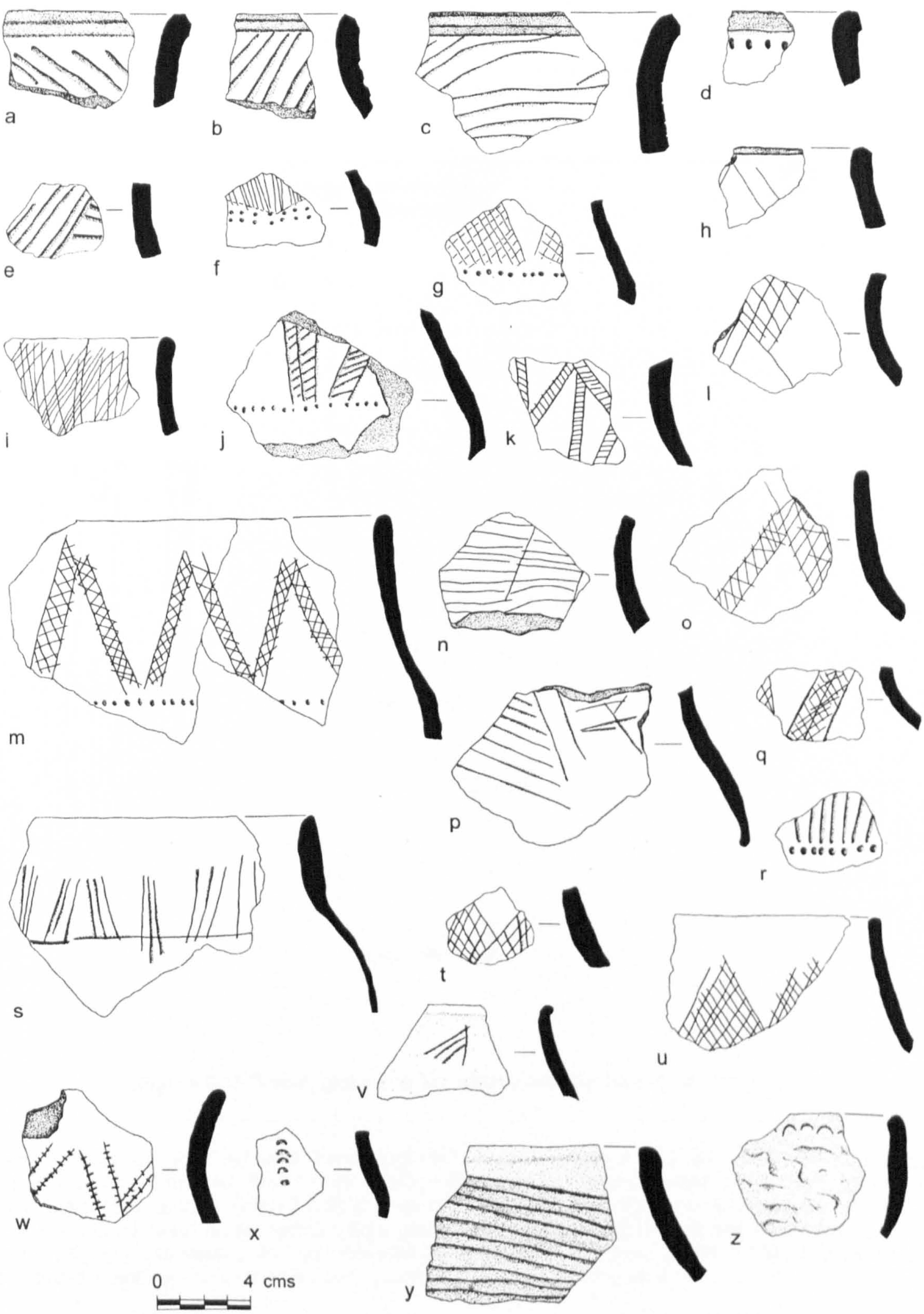


Figure 6.16 Selected pottery sherds from Chombo 01

a-e transitional Kwale Ware to early TT/TIW; **f-z** early TT/TIW.

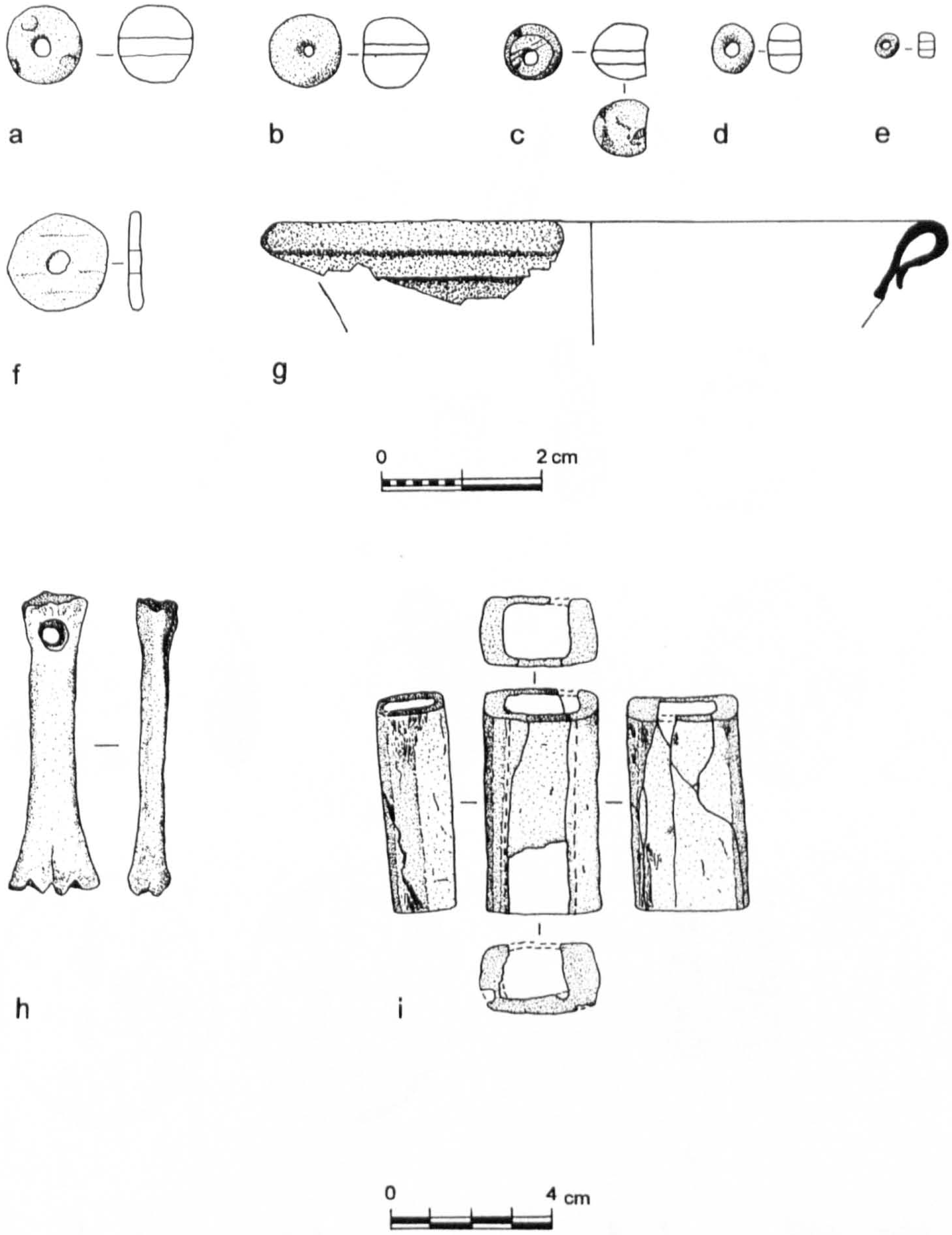


Figure 6.17 Beads, glass and bone/ivory objects from Chombo 01

a carnelian bead, polished spheroid, translucent mid-red, from trench 4 (13); **b** carnelian bead, polished spheroid, translucent mid-red, from trench 4 (14); **c** glass bead, wound spheroid, polychrome, translucent red with black streaks, from trench 2 (09); **d** glass bead, wound oblate, light greenish yellow, from trench 4 (18); **e** glass bead, short drawn cylinder, light green, from trench 2 (09); **f** shell bead, medium disc, from trench 2 (32); **g** glass vessel, rim, dark blackish blue, Sasanian (?), from trench 1 (39); **h** bone amulet, *Capra hircus* metacarpal, from trench 2 (48); **i** worked ivory box, from trench 4 (14).

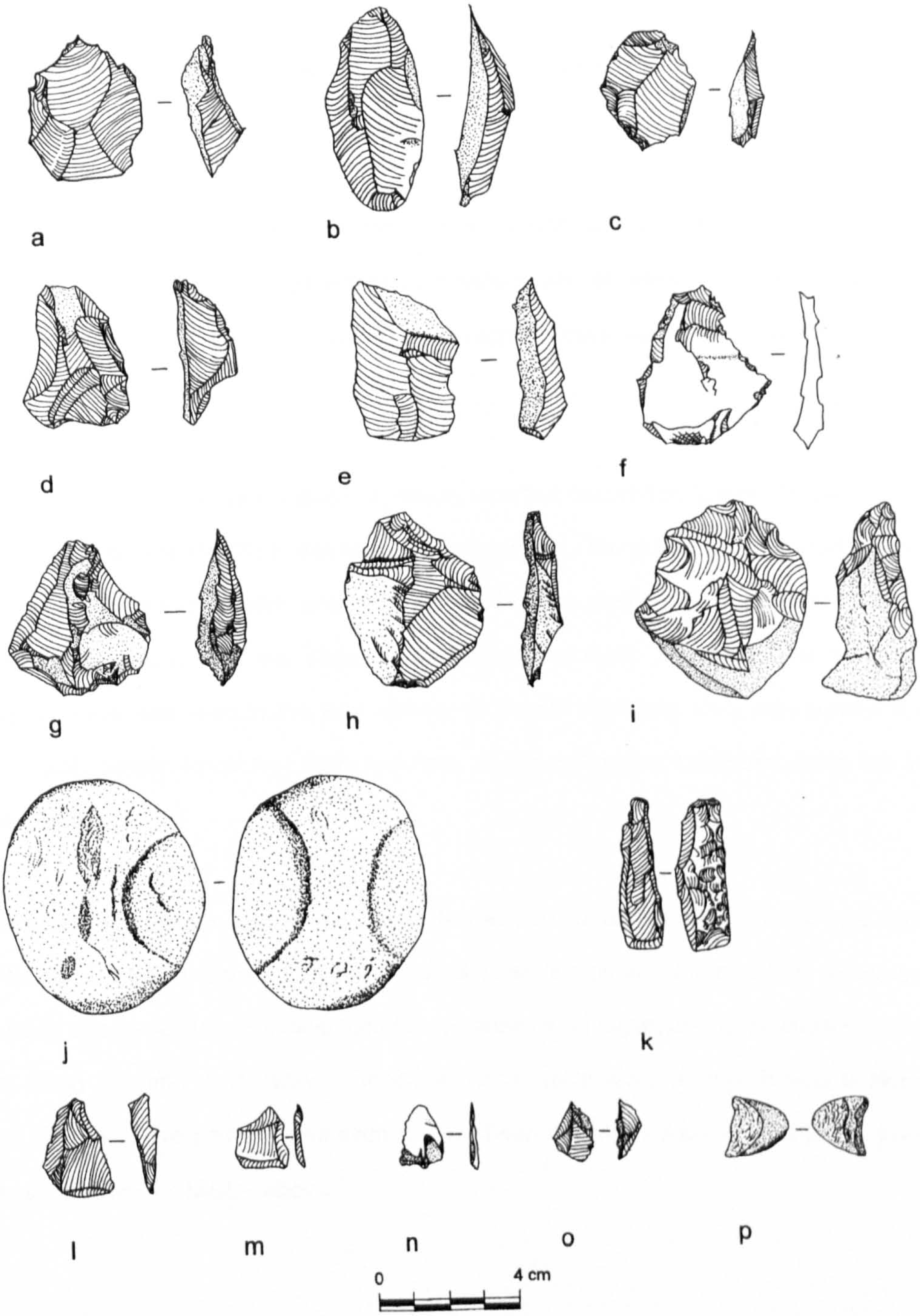


Figure 6.18 Lithic artefacts from Chombo 01

a lithic, shale, from trench 4 (13); **b** lithic, shale, from trench 1 (03); **c** lithic, shale, from trench 4 (13); **d** lithic, shale, from trench 1 (04); **e** lithic, ultra basic igneous, from trench 1 (04); **f** lithic, Mariakani sandstone, from trench 4 (14); **g** lithic, shale, from trench 1 (13); **h** lithic, shale, from trench 4 (14); **i** lithic, shale, from trench 4 (13); **j** rubbing stone, dark bluish-grey igneous, possible metamorphic, from trench 5 (25); **k** lithic, shale, from trench 4 (18); **l** lithic, ultra basic igneous, from trench 1 (03); **m** lithic, shale, from trench 4 (14); **n** lithic, shale, from trench 2 (09); **o** lithic, shale, from trench 2 (09); **p** gum coppal, from trench 4 (18).

6.3.7 Summary

The survey and excavation identified two settlement foci (areas A and B) on the east floor of the Chombo valley. Area A was evaluated with the excavation of Trenches One, Two and Four, area B with the excavation of Trench Three.

Trench One was situated on a natural rise at the north-eastern limits of area A. This rise was seen to have been unoccupied for the duration of the settlement's history, and its prominence and close proximity to a traditional burial area perhaps suggests this was due to some ritual/social function. A parallel is drawn with the central *moro* of the Kaya.

Trenches two and four both gave evidence for clearly stratified occupation layers. In both trenches up to five stratified horizons were identified, with associated structures. The gradual transition witnessed between layers was seen to represent the continuous occupation of area A, over several generations. This continuity was particularly emphasised by the observed variability in ceramic attributes over time, where by a proportional increase was seen in the total number of sherds exhibiting early iron-working Kwale Ware attributes, notably bevels, flutes and thickened rims, as the excavation continued down into the earliest levels (see Chapter 7).

In contrast area B was seen have only one clearly defined occupation horizon. The low proportion of Kwale Ware attributes here would suggest that this was a relatively late phase of occupation, contemporary to the upper horizons of area A. Area B should therefore be seen as an expansion of the already well established settlement along Chombo river valley. Finally, a natural gully west of area B was explored with the excavation of Trench Five and this was seen to have been filled with a series of washed down soils and surface materials from the hillside above.

6.4 Mteza 01 (HiJw55): site description and excavation

Survey of Kenya Map Sheet: 201/1 UTM zone 37M 557760 9547543
Lat. 4° 05' 34" S Long. 39° 31' 19 N
Survey Region: Kwale
Socio-Natural Zone: Lutsangani Upland

Situated on a north-facing spur, some 20m above sea level, Mteza 01 overlooks a steep incline down to the strongly dissected valley of the River Cha Simba (Pemba), which enters the mouth of Port Reitz Creek some 2 km further north. The area is characterised by poor, shallow shale soils of the coastal upland, mainly covered by dry bushed grassland grazed by cattle and goats, and interspersed with occasional cultivated plots, particularly along the many seasonal tributary valleys which dissect this landscape. Some 4 km to the west rise the hill slopes of Mulangani Forest.

The site of Mteza 01 is only one of five closely spaced settlement sites which are located together in an area which has been broadly labelled 'Kaya Mwanyundo' by local Digo elders (see figure 5.10). This is said to have been a settlement established by a splinter group from the Digo settlement at Chombo and indeed, surface observation of pottery sherds with late TT/TIW ceramic attributes on three of these sites (Mteza 01 and 02, and Banga 01), does seem to place the early settlement of this area concurrently with the later stages of occupation seen at Chombo (see section 6.3 above). However, a completely opposite tradition is recorded by Spear, in which Mteza was seen as an area occupied by Digo from Shungwaya, and from where the Digo gradually dispersed to found their separate Kayas (Spear, T. 1982: 152).

Each settlement, situated as they are on the valley ridge tops, is clearly visible to its neighbours. Furthermore, the site of Mteza 01 itself has clear 360° views of the surrounding region. Its overall situation on a narrow spur with steeply dropping slopes thus gives a strong feeling that this location has been purposefully chosen as a strategic position against possible aggressors.

The site was seen to cover an area of 1.32 ha. In all, three trenches were excavated, two along the flat ridge of the spur itself, and one on its western slope where much of the surface material seemed to have accumulated (see figure 6.19).

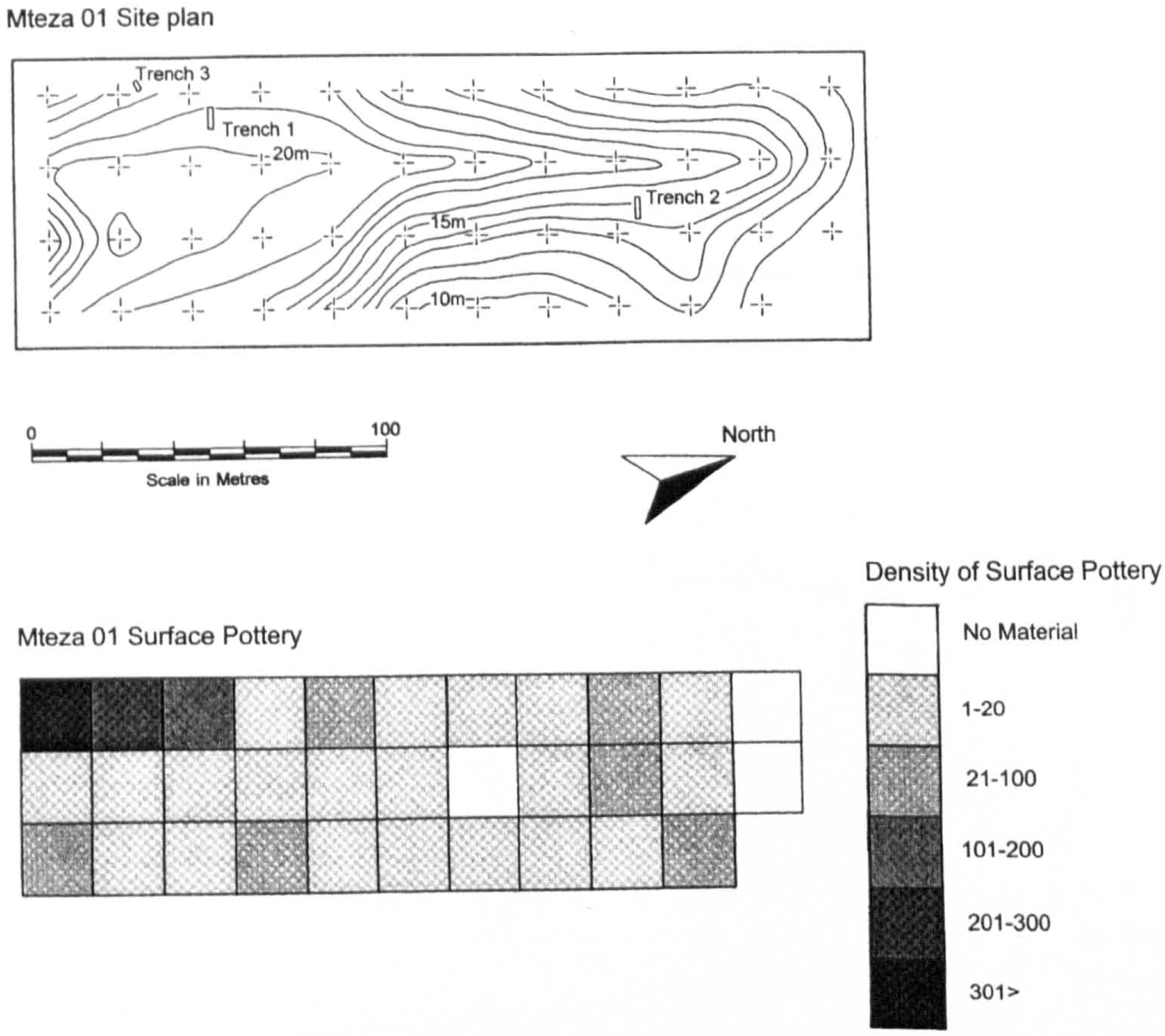


Figure 6.19 Mteza 01 site plan and surface distribution

6.4.1 Trench One

Trench One was situated at the wider, southern end of the spur, on its west-facing slope. An area 6m by 1.5m was excavated, running east to west across an area of high surface material concentration (see figure 6.20). The topsoil was a mid greyish brown silty sand, extending down to a depth of 0.36m. This was seen to be a disturbed cultivation horizon, intermixed with pottery and bone from the clearly differentiated mid orange brown silty sand layer (02) below. Whilst no features were evident, the presence of charcoal and house daub fragments suggested that this was the lower undisturbed horizon of an occupation surface, extending to a depth of 0.42m. Finds included frequent pottery sherds and bone, two glass beads (one a medium wound Indian red, the other a medium drawn light yellow-green), and a small fragment of rock crystal.

Below this, a light orange brown silty sand layer (09) was excavated to a depth of 0.56m, during which an overall reduction in the number of pottery sherds and bone was seen. No special finds were recovered, and the quantity of charcoal was too small to collect a large enough sample for radiocarbon analysis. However, this surface was seen to have been cut by a number of features. During the excavation of layer (09) a human skeleton was seen to be emerging from the trenches north-facing section edge, and a clean up of the section showed that this was a burial (26) with a grave cut (27), presumably orientated north-east to south-west. Whilst no further investigation was made, so as not to disturb the remains any further, a total 28 shell beads (26 of which were discs, 2 of which were cylinders), presumably from a necklace/bracelet belonging to the deceased, were recovered from the already excavated loose of the grave fill.

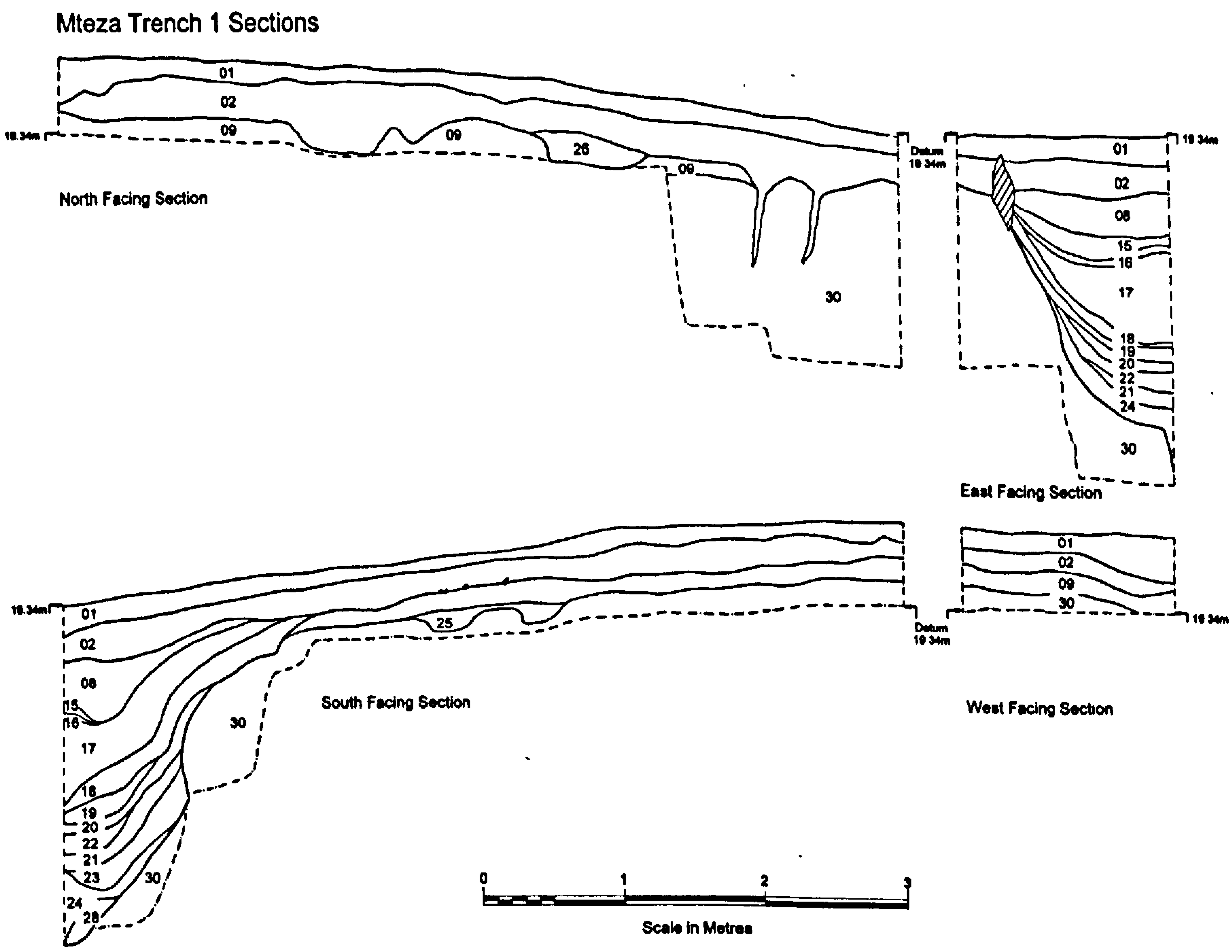


Figure 6.20 Mteza 01 Trench One sections

In addition, a large pit (29), with an estimated diameter of at least 2m, was seen to have been quartered by the trench's north western corner. This was excavated up to a depth of 2.41m, but could not be fully bottomed. A series of 12 fills were recorded (08, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 and 28), the second to last of which was a lens of light blue ashy material containing fragments of burnt bone and charcoal (24). A measured sample was taken for future flotation. The function of this large pit is unclear. Only a small handful of pottery sherds were recovered from each context, and the apparent use of the hill slope for rubbish disposal (see Trench Three below) would mitigate against this function. Two other possibilities present themselves: that of either storage or ritual, but neither case is supported with the available evidence (unless perhaps the charred bones from fill (24) turn out to be human).

Below layer (09), a lens of light brownish grey silty sand (25), with occasional fragments of charcoal, and a small selection of pottery sherds, was seen to sit in an irregular depression, cut into a light orange brown clay sand below (30). This feature, again fell only partially within the excavation limits and its interpretation is uncertain. However, a charcoal sample was collected for radiocarbon analysis, for which a date range of between the 8th and 10th centuries AD was obtained (Pta-7955; see table 6.6). Layer (30) below was seen to be natural subsoil, with no differentiation evident within this context as it continued down to the same depth as that cut by the large pit.

6.4.2 Trench Two

At the northern end of the spur, the surface survey had identified a second concentration of surface materials on the east-facing slope. An area measuring 6m by 1.5m was therefore laid out for excavation, again running east to west to provide a broad cross-section of the occupation deposits in this area. The topsoil was seen to be a light yellowish grey silty sand (03), extending to a depth of 0.29m. A fair quantity of pottery and bone was recovered from this layer, but it was clear that the context had been disturbed by cultivation. Below, a light greyish yellow silty sand (06) was found to continue to a depth of 0.49m, before reaching a light yellowish silty sand, with orange (iron) mottling (12). The horizon between these two layers was indistinct, with a gradual transition between contexts marked by a corresponding decrease in the number of finds. At a depth of 0.70m, layer (12) was seen to overlie a very firm, light orange yellow sandy clay natural subsoil (14). This was excavated to a final depth of 0.75m, before the excavation was abandoned.

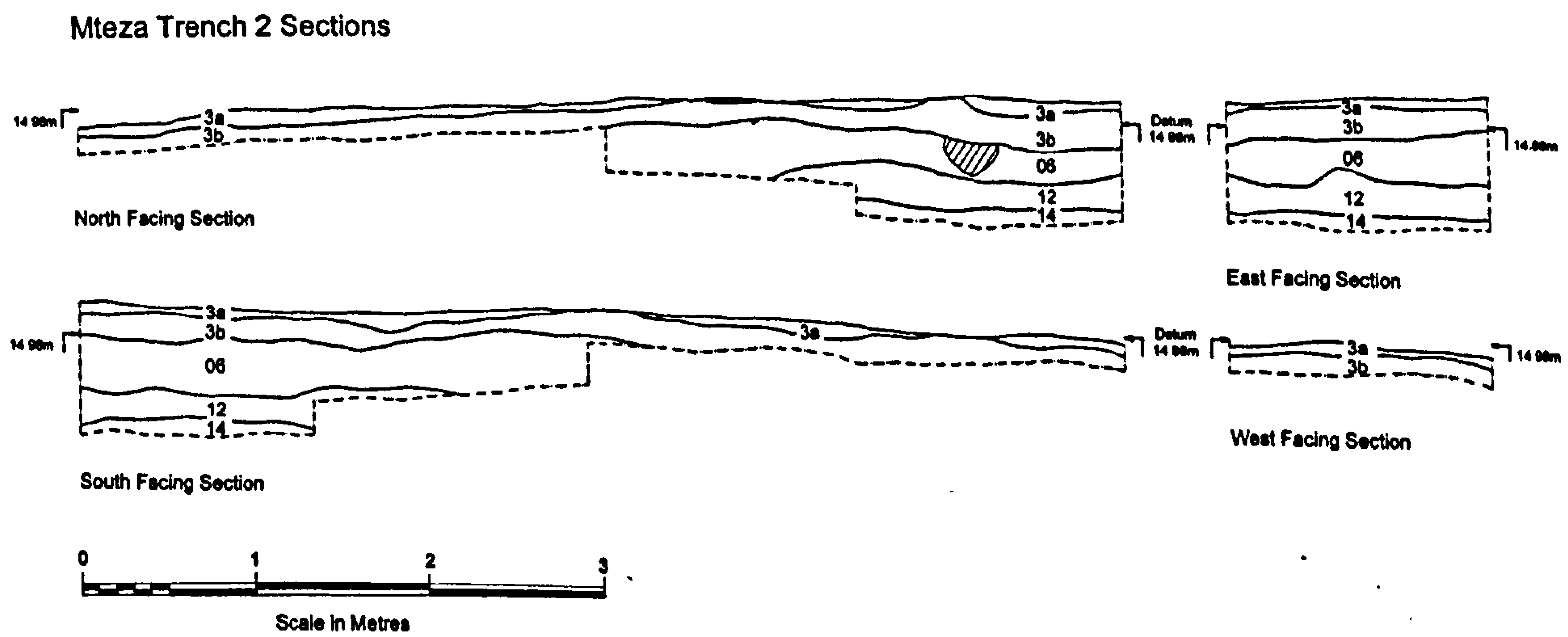


Figure 6.21 Mteza 01 Trench Two sections

The lack of any clearly defined occupation layers in this trench, the absence of features, and the relatively small sample of finds suggest that this area was never intensively settled: the surface material presumably deriving from occupation on the spur's southern and central portions.

6.4.3 Trench Three

The highest concentration of surface materials was observed on the west-facing slope of the spur's southern end. Here the spur dropped steeply down to the Cha Simba (Pemba) River, the upper levels of which were seen to have materials eroding from the steep incline. A small trench, 3m by 0.5m, was opened up to test whether this material was eroding from exposed occupation layers, or was indeed a result of the occupants practical use of the steep hill side for rubbish disposal (see figure 6.22).

The topsoil was a loose, mid greyish black sandy silt (04), extending to a depth of 0.21m. This was seen to represent hill-wash from above, and contained both pottery, bone and shell fragments. Below this, an intermixed layer of fine silty sand lenses (05) was encountered. This continued to a depth of 0.49m, where it overlay a restricted lens of mid greyish yellow silty sand (07), which continued to a depth of 0.58m. Both of these contexts had the highest proportion of pottery sherds recovered from this trench. Layer (07) also had a high concentration of fresh water mollusc, and a stone cylinder similar to those reported from Kilwa (Chittick, N, 1974). Below (07), a compact layer of mid yellow brown silty sand (10) was reached. This had a number of fragments of house daub, charcoal and pottery. Layer (10) reached a depth of 0.75m, at which point it was seen to overlie a thin and rather patchy lens of dark yellowish brown silty sand containing flecks of charcoal and pottery sherds. Below this, a compact, light yellow brown clay sand (13) natural sub-soil was encountered.

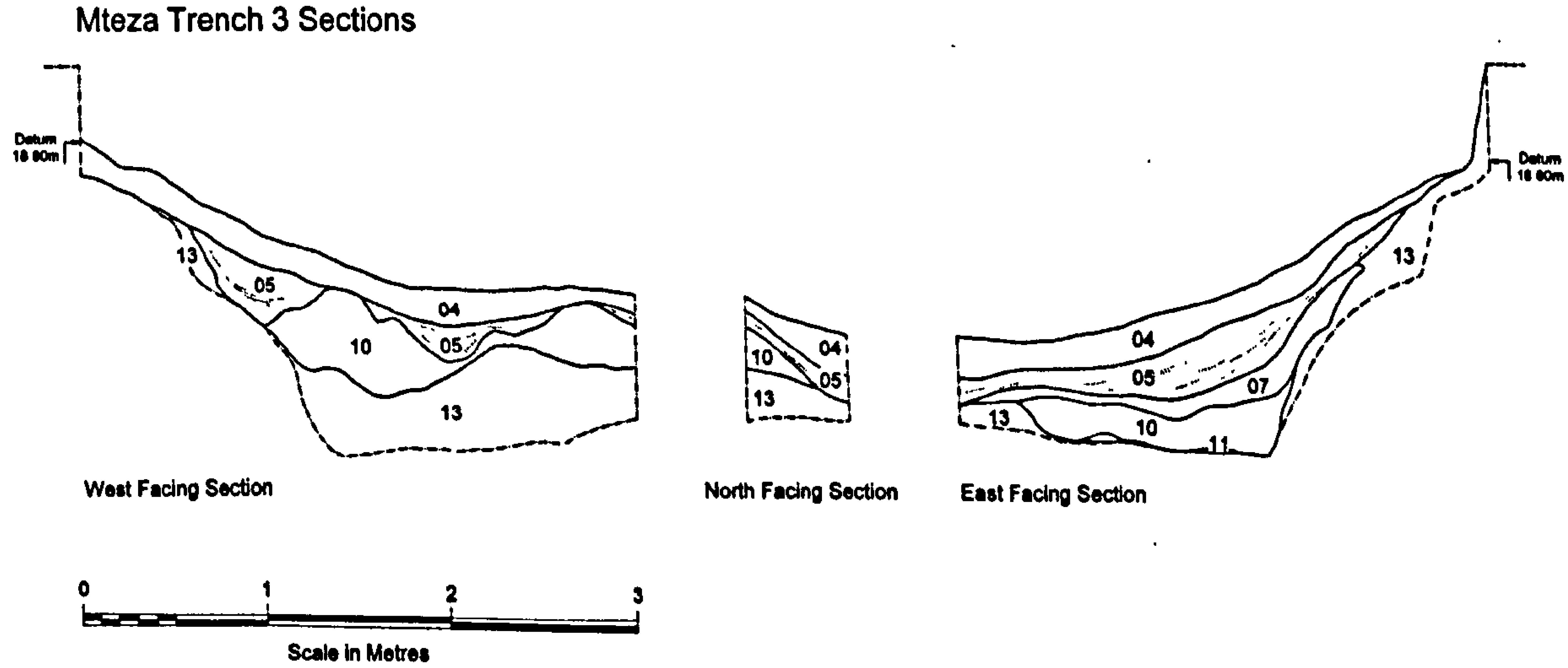


Figure 6.22 Mteza 01 Trench Three sections

6.4.4 Finds

The excavated finds from the site of Mteza 01 are summarised in table 6.3 below. A total of 3,880 sherds of pottery were excavated from the three trenches, 1,181 of which were seen to be diagnostic and retained for further analysis. Both middle and later iron-working, farming TT/TIW attributes were seen to predominate the collected assemblage (see figure 6.23 and Chapter 7). A small sample of faunal materials, 325 bone/shell fragments in all, were also excavated, primarily from Trench One. Although the Mteza community kept domesticate livestock, it is clear from the variety of wild fauna present that they were also dependent upon hunting and gathering for their subsistence (see section 8.4). Interestingly, no iron slag or other iron artefacts were found on this site, and neither were any worked lithic artefacts encountered. However, special finds did include a number of shell beads, 26 of which were medium sized discs, and 2 of which were medium sized cylinders, along with 2 imported glass beads, 1 a medium wound Indian red, the other a medium drawn light yellow-green. In addition, a stone cylinder and a fragment of rock crystal were collected (see figure 6.24).

Mteza 01		Pottery		Beads				Stone		Bone
Trench	Context	a	b	c	d	e	f	g	h	i
1	01	121	397			1	1			24
	02	474	955						1	130
	08	14	34							
	09	63	123							20
	25	19	15							3
	26		1	26	2					8
	19	2	9							
	20	5	8							
	21	4	21							
	23	6	13							
	28	3	7							
2	03	59	159							103
	06	41	145							
	12		3							
3	04	34	63							
	05	142	384							
	07	118	142					1		37
	10	53	157							
	11	23	63							
	Total	1181	2699	26	2	1	1	1	1	325

Table 6.3 List of materials collected from Mteza 01 by trench and context

Notes: **a** diagnostic pottery, **b** non-diagnostic pottery, **c** shell bead (disc), **d** shell bead (cylinder), **e** glass bead (medium wound Indian red), **f** glass bead (medium drawn, light yellow-green), **g** stone cylinder, **h** rock crystal, **i** bone

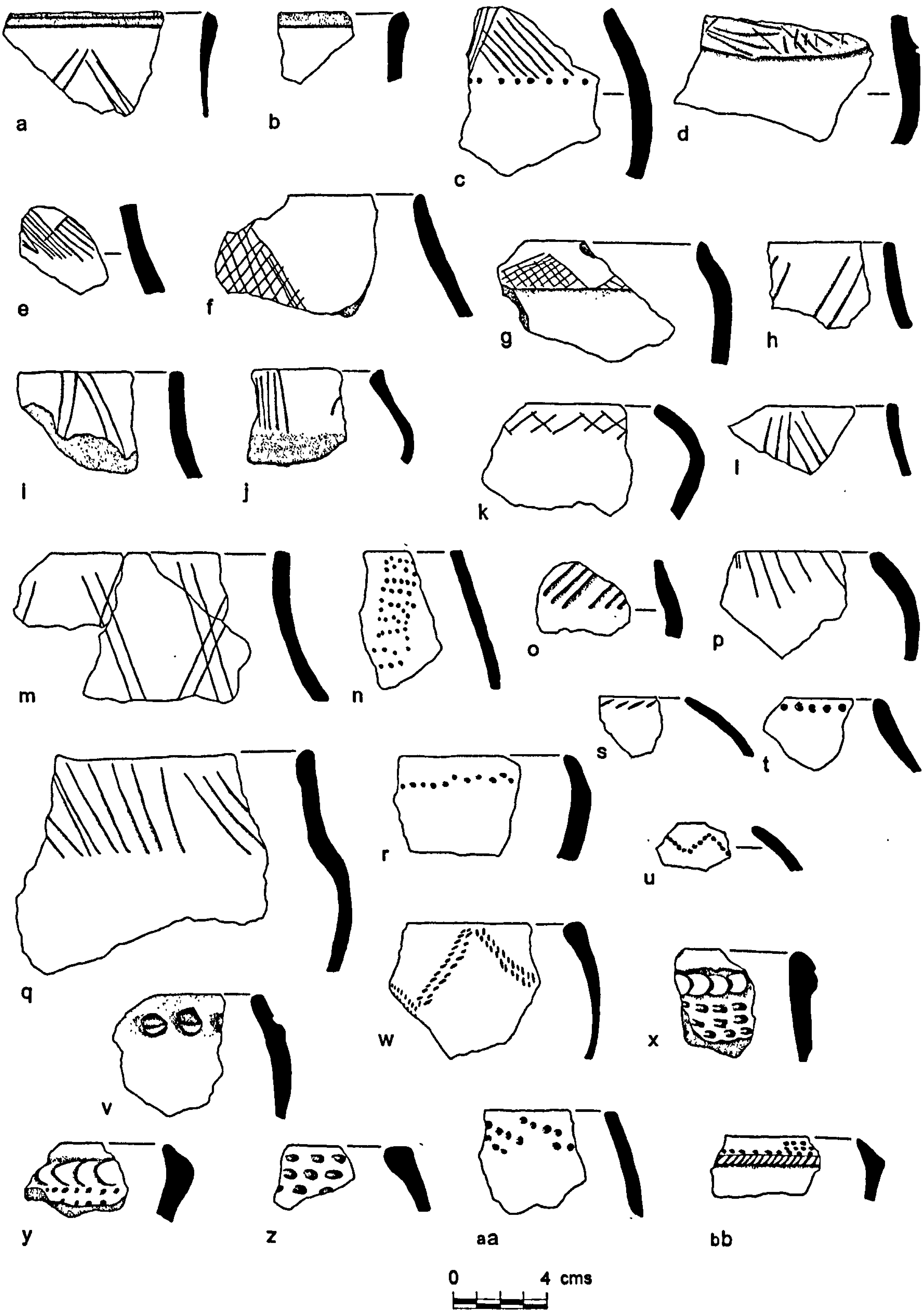


Figure 6.23 Selected early TT/TIW pottery sherds from Mteza 01

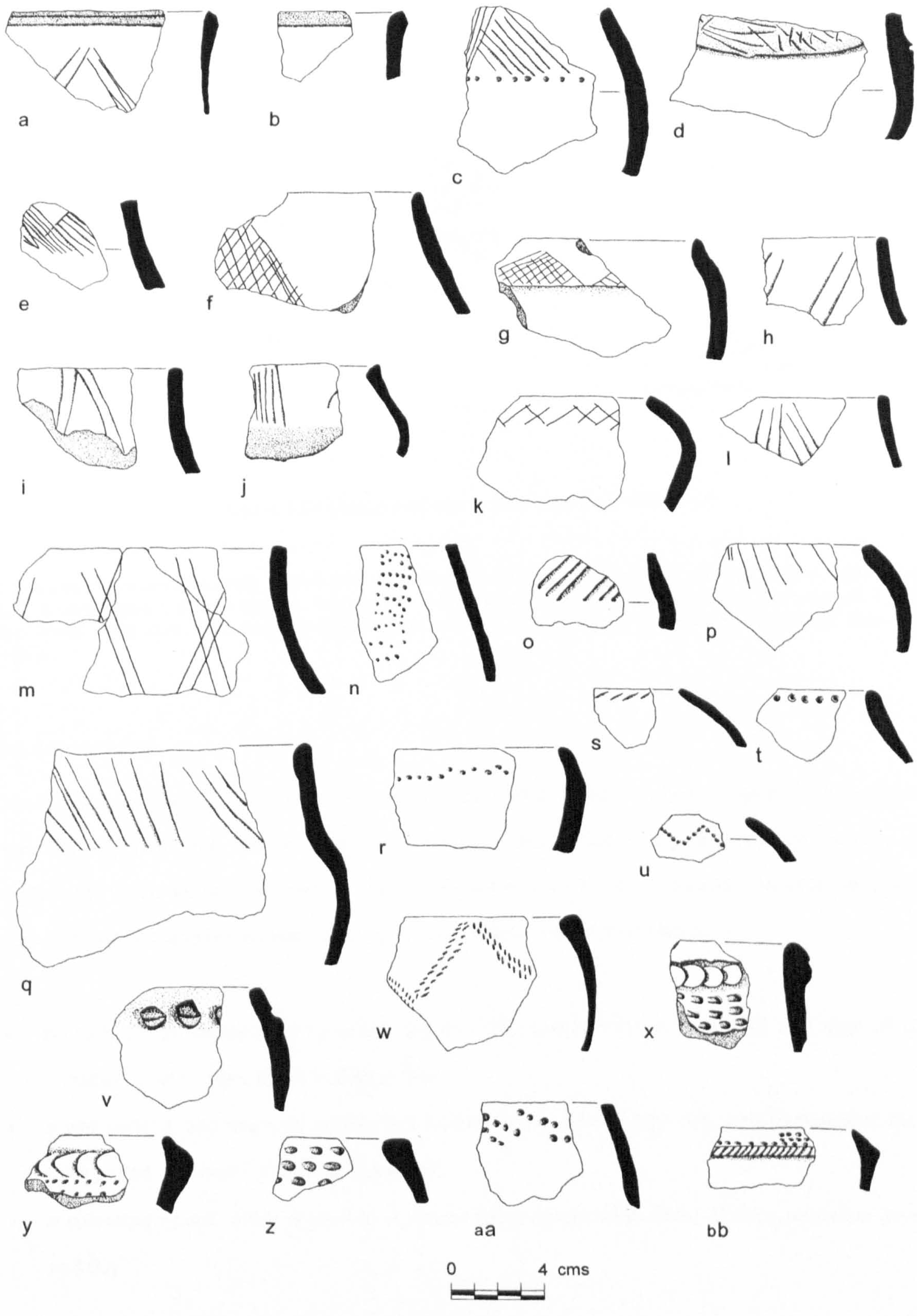


Figure 6.23 Selected early TT/TIW pottery sherds from Mteza 01

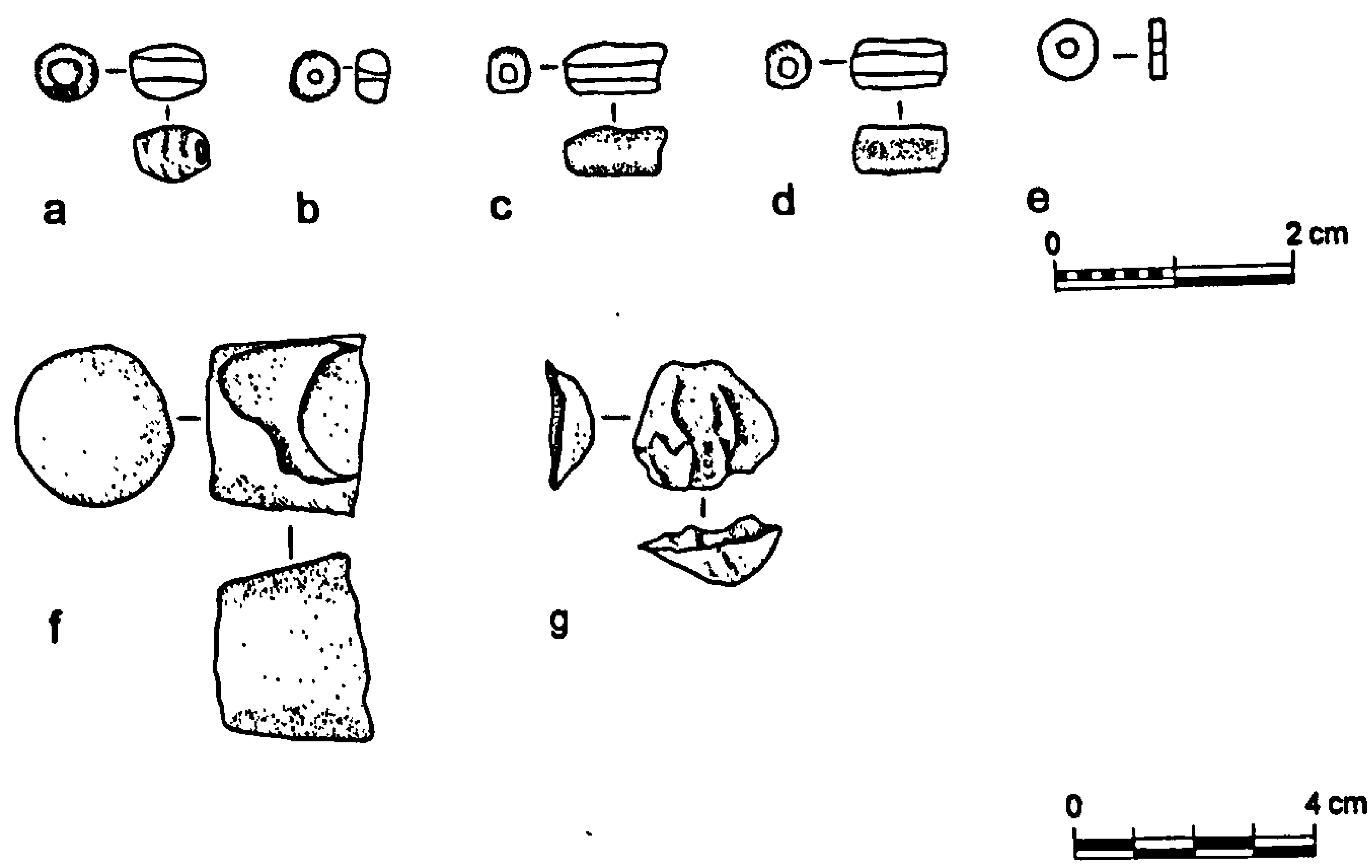


Figure 6.24 Beads and stone artefacts from Mteza 01

a glass bead, wound spheroid, Indian red, from trench 1 (02); **b** glass bead, spheroid, yellow, from trench 1 (02); **c** shell bead, medium tubular, from trench 1 (26); **d** shell bead, medium tubular, from trench 1 (26); **e** shell bead, small disc, from trench 1 (26); **f** stone cylinder, from trench 3 (07); **g** stone fragment, from trench 3 (13).

6.4.5 Summary

The low density of finds and the shallow deposits excavated at Mteza 01 would suggest that this settlement was relatively small and short-lived, one of a series of five middle to later iron-working, farming period settlements which are seen to overlook the Cha Simba (Pemba River). However, the excavated deposits from trenches one and two do suggest the presence of three main cultural horizons:

- an early phase, represented by layers (09) and (12), during which a burial (26) and large pit (29) of uncertain function were found in Trench One.
- a well defined, and relatively undisturbed horizon rich in cultural materials, and representing the sites main period of occupation (layers 02 and 06)
- a cultivated topsoil, which is seen to represent the disturbed final period of site occupation (layers 01 and 03)

Furthermore, the excavation of Trench Three also demonstrated that the surface materials seen to be concentrating along the spur's upper west-facing slopes were a result of the disposal of waste down the spur's steeply sloping sides, partly explaining the low retrieval of finds from trenches one and two.

Finally, it would seem from the distribution of surface materials and the results from the three excavated trenches, that the settlement foci was centred along the spur's southern plateau, some 20 m east of trenches one and three.

6.5 Mtsengo 01 (HgJw12): site description and excavation

Survey of Kenya Map Sheet: 198/1 UTM zone 37M 568940 9588320
Lat. 3° 43' 28" S Long. 39° 37' 15" E
Survey Region: Kinarani
Socio-Natural Zone: Kaloleni Upland

Mtsengo 01 is situated in the Kaloleni Uplands, along a gently sloping valley bottom, some 280m above sea level, and 1 km west of Mtsengo trading centre. The valley is dissected by two seasonal streams, running north and south respectively, both of which form part of the River Ndzovuni's catchment area. The region's coarse grained sandy soils are here seen to be very deep but excessively drained. Despite this, the valley is regularly placed under mixed cultivation.

The site was initially drawn to our attention by local Giryama elders who, through their oral traditions, recall this site as having been temporarily occupied by a mixed group of Giryama, Ribe and Chonyi Mijikenda following their migration from Shungwaya and before their movement to their respective so-called primary Kayas. A preliminary survey of the whole valley suggested a high concentration of materials at the head of these two streams, forming a large multi-component settlement extending over some 7.56 ha across the west-facing valley slope. As a result, an east-west section along this area was selected to sample surface materials, the results of which suggested occupation from the later half of the middle to later iron-working, farming periods. A plot of the surface density of materials demonstrated a concentration of settlement evidence at the foot of the valleys west-facing slope, and this area was selected for excavation. A total three trenches were excavated, spaced regularly at 20m intervals and running across the site in an east to west transect (see figure 6.25).

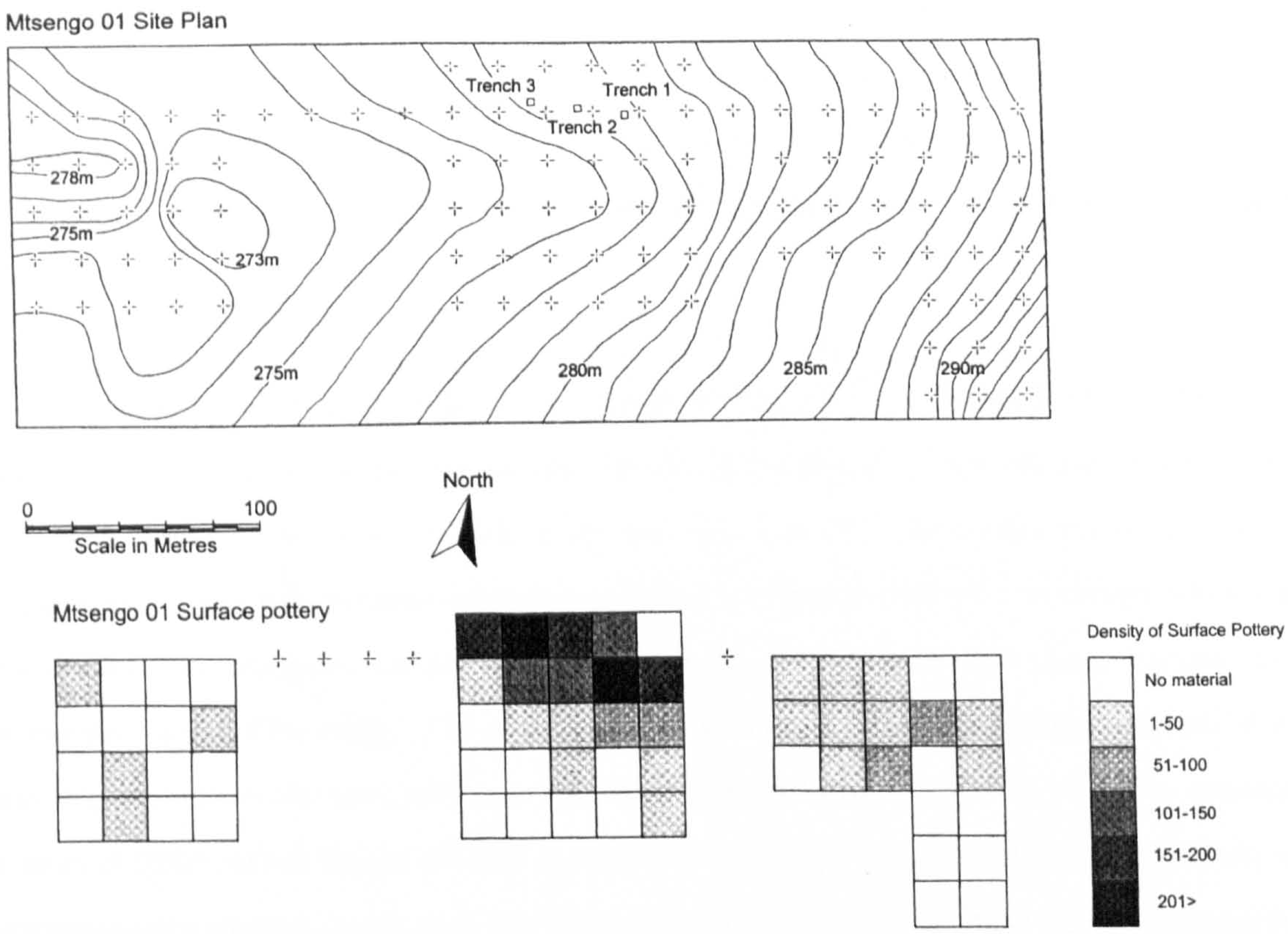


Figure 6.25 Mtsengo 01 site plan and surface pottery distribution

6.5.1 Trench One

Trench One was situated at the transect's eastern end. An area measuring 3m by 3m was excavated (see figures 6.26 and 6.27). The cultivated topsoil was seen to continue to a maximum depth of 0.28m, and was made up of two distinct horizons, a loose mid greyish brown silty sand (1a), which overlay a darker greyish brown silty sand (2a). Both contexts were seen to have frequent fragments of charcoal, house daub, pottery and bones, the quantities of which increased as the excavation proceeded down. A fragment of furnace tuyere and a total 12 pieces of iron slag were also collected.

Below the topsoil, a layer of mid greyish brown silty sand (3a) was encountered. This well-defined and undisturbed occupation surface was seen to have been cut by a number of structural features. Two intersecting gullies, the first running from the trenches southern section (cut 07), and terminating 2.46m to the north, the second (cut 41) running from the first at its mid-point and running in a south-westerly direction for 2.40m, were seen to form part of a foundation trench for a house or dividing fence. The base of a post-hole (cut 26) was identified in the floor of gully (41), and a second post-hole (cut 09) was identified 0.40m to its north. In addition, a further two post-holes (cuts 11 and 13), closely spaced together, were seen at the northern end of gully (07). A number of these features were seen to contain samples of pottery and bone fragments, as well as a number of special finds, including that of a copper bead and copper fragment, and a drawn Indian red glass bead, and a dark blue-black folded glass rim fragment. Layer (3a) itself, was seen to continue to a depth of 0.54m, the deposit including a fair quantity of pottery, bone, a spheroid shell bead, and two further drawn Indian red glass beads. Interestingly, no iron-slag was found in this occupation horizon.

Below layer (3a), a series of three consecutive occupation deposits were identified, the horizons of which were seen to gradually merge into one another. The first, a mid greyish orange silty sand surface (29) was excavated to a depth of 0.65m. A dark brown silty sand lens (75), presumably the remains of tipped domestic waste, was identified mid-way down in this layer, on the north-facing trench section. Unfortunately this lens was not recognised until just after its removal, when it had been intermixed with loose from the surrounding matrix of layer (29). The second occupation deposit, layer (46), changed in colour to a mid greyish orange brown silty sand, with a corresponding increase in charcoal content. This was excavated to a depth of 0.80m, at which point the third occupation deposit, layer (57), a mid greyish brown silty sand, characterised by charcoal, house daub fragments and patches of ash was defined. A notable concentration of such materials were seen to lie at the interface of the lower horizon of layer (57) and the clay floor surface below (58). This was allocated a separate context number (76). A charcoal sample was collected from layer (57) at a depth of 0.77m, and submitted for radiocarbon analysis. A date range between the early 14th and mid 15th centuries AD was obtained (Pta-7956; see table 6.6).

Each of these layers had a significant concentration of pottery and bone. In addition, the relative quantities of the special finds, including pieces of iron-slag, fragments of iron and copper artefacts, rubbing stones and both shell and glass beads would all suggest that these horizons mark the site's peak period of occupation and activity.

At about 0.98m, the lower horizon of layer (57) was seen to overlie a firm, mid yellow orange sandy clay layer (58), which extended over the eastern half of the excavation trench only. This was interpreted as the edge of a compacted clay floor surface. Finds within the matrix of this structure were seen to be significantly less than that observed in the surrounding occupation layers. However, an iron blade, 3 copper wire coils, and 2 shell disc beads were collected from its upper horizon. Below this clay floor, a light yellowish grey silty sand surface was excavated. This layer (64), extending to a depth of 1.41m, also contained frequent fragments of charcoal and house daub, as well as pottery, an iron arrow head, iron-slag, and fragments of gum copal.

Below layer (64), evidence for intensive occupation is considerably less. A dark greenish grey lens of burnt humic material (68) was encountered immediately below layer (64), but only a very few sherds of pottery and bone fragments were collected. Below this was a light greyish white sandy layer (67), extending to a depth of 1.75m, and from which sherds of pottery, bone fragments and iron-slag were collected. This was seen to be the earliest horizon with evidence for human activity within the site, and overlay a natural clean white sand (69), which continued to a depth of 1.87m before changing to a natural white sand with brownish silty mottling (70). This was excavated to a final depth of 2.27m.

Mtsengo Trench 1 Sections

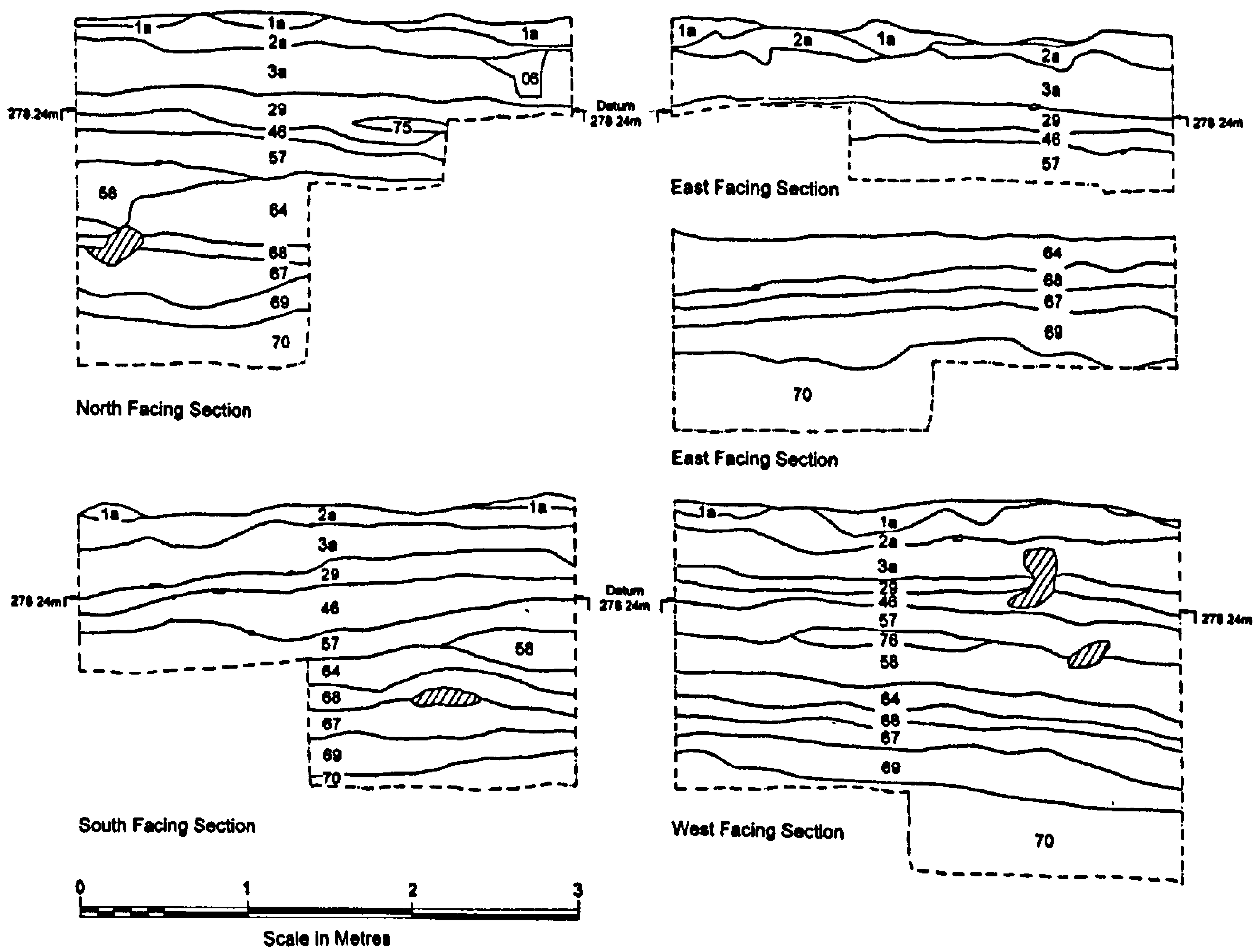


Figure 6.26 Mtsengo 01 Trench One sections

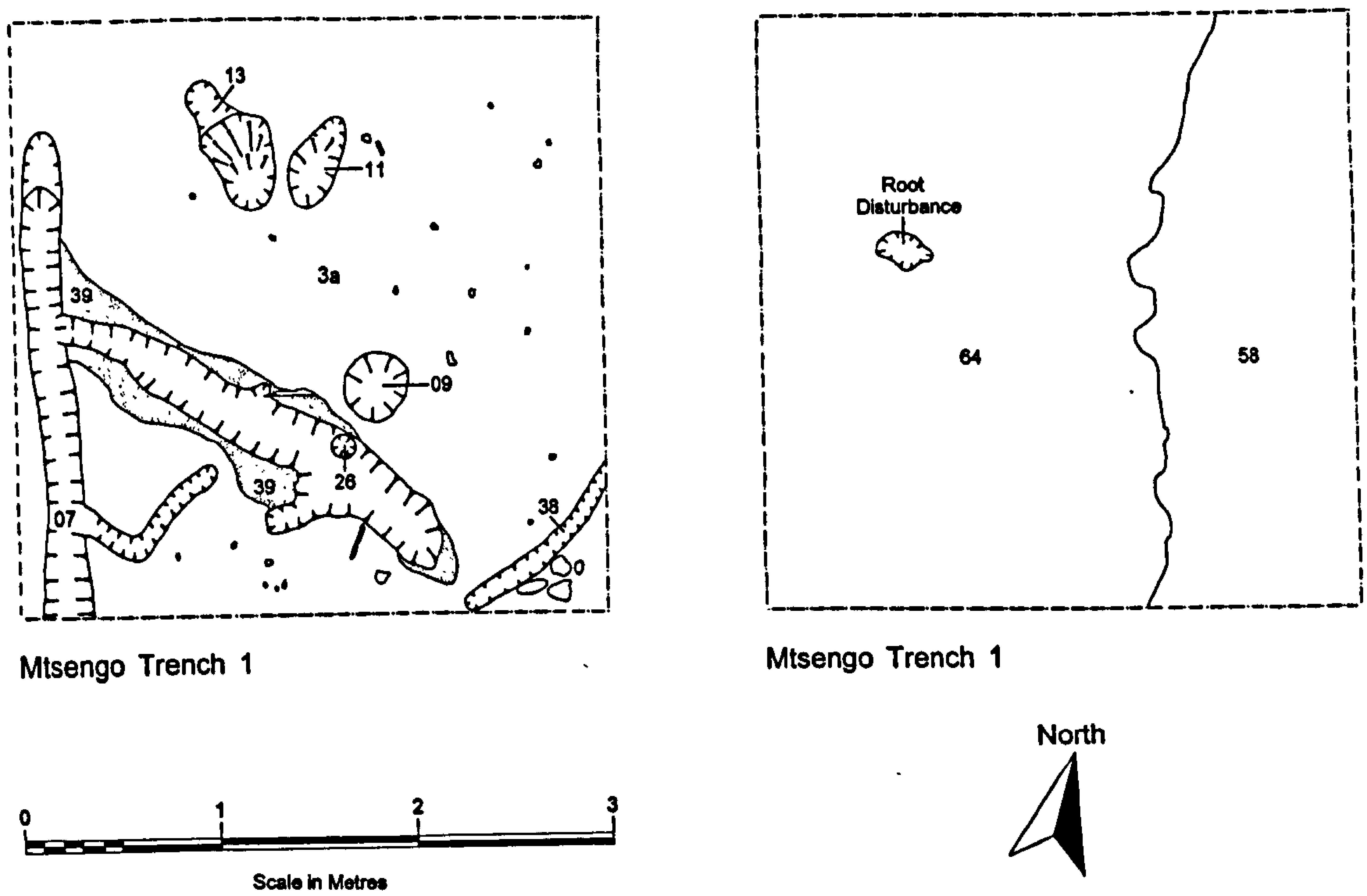


Figure 6.27 Mtsengo 01 Trench One plans

6.5.2 Trench Two

Trench Two was situated 20m west of Trench One. An area measuring 3m by 3m was excavated (see figures 6.28 and 6.29). The cultivated topsoil was seen to be made up from the same two distinctive horizons, which had been identified in Trench One: a loose mid greyish brown silty sand (1b), overlying a darker greyish brown silty sand (2b), continuing to a depth of 0.19m. Again, both contexts contained fragments of charcoal, house daub, pottery and bone, the overall quantity being greater than that seen in Trench One. In addition, a total 37 pieces of iron-slag were collected.

Below this disturbed topsoil, a mid greyish brown silty sand layer (3b) was encountered. This was seen to be the same as layer (3a) excavated in Trench One, extending to a depth of 0.26m. Finds included pottery, bone and 17 pieces of iron-slag. A single post-hole (05) was seen to be cut into this layer, 0.13m deep and 0.13m in diameter and filled with a mid grey black silty sand (04). The lower horizon of (3b) was seen to intermix with the upper horizon of a mid greyish orange brown silty sand (14), which continued to a depth of 0.34m. Finds of pottery and bone were seen to increase in this layer, 32 pieces of iron-slag, and a copper roll fragment, copper bead and drawn Indian red glass bead were also collected.

Layer (14) was seen to overlie two adjacent surfaces, layers (30) and (31) respectively. Both were seen to be the same mid orange brown silty sand, but differentiation was made on the basis of a marked presence/absence of charcoal and house daub fragments. Each layer was separated from the other by a narrow line (c. 0.18m in width) of compact sandy clay (16), running east to west across the trench, and which is believed to represent the foundation of a house/fence line. Below this, and overlying layer (30), a discontinuous spread of mid reddish orange sandy gravel (18) was removed. Layers (30) and (31) were respectively seen to represent the inside and outside floor surfaces of feature (16). Both had pottery and bones, but pottery occurred much more frequently in layer (30), whilst layer (31) had the greater proportion of charcoal and house daub. A large quantity of iron-slag and several fragments of tuyere were collected from both contexts, but layer (30) also had fragments of copper. Layer (30) was also seen to be cut by two post-holes (33) and (35), spaced some 0.50m apart and broadly placed parallel with feature (16).

Similarity between the soil matrix of layers (30) and (31) made it difficult, if not impossible to visually determine whether these layers were stratigraphically contemporary, or whether one layer predated the other. However, at about 0.35m, both layers were clearly seen to overlie a distinctive mid orange brown silty sand layer (40). Again, charcoal and house daub fragments were present, and pottery, bone, iron-slag and tuyere fragments and an iron nail were collected. This layer continued to a depth of 0.57m, where it was seen to overlie two further layers, a mid greyish brown silty sand (44), which continued to a depth of 0.69m, and which itself partly overlay a compact, yellow orange sandy clay house floor (48). The small amount of finds recovered from layer (44) suggests that this was a dumped material thrown against layer (48) to level the floor surface. Layer (48) itself appeared to be a purposefully built floor surface, made up of re-used house daub and sandy clay. Finds of pottery, bone, iron-slag, tuyere fragments, a well-preserved iron-hoe, and a piece of gum copal were collected from its matrix. In addition, lenses of ash (60) suggest that it had been built up over a period of several phases, before reaching its final thickness of 0.28m. Four post-holes were seen to have been cut into this floor (cuts 50, 52, 54 and 56), regularly spaced at 0.50m apart, and positioned to form a square (see figure 6.29).

Below layer (44), a mid greyish orange brown silty sand (59) was reached. This partially overlay a light greyish brown silty sand (61), which was seen to lie directly below layer (48), and cut by a pit (63), 0.12m deep and 0.27m in diameter, filled by a very densely packed sandy clay (62). The function of this pit was unclear, although it was suggested that the clay might have been stored in the pit for the production of pottery (Kambarangwe, F. 1997; *pers. com.*). Adjacent to this feature, and cutting through both layers (59) and (61), a second pit (66), 0.34m deep and 0.94m in diameter, was defined, filled with a mid orange grey silty sand (65), with lenses of greenish, possibly coppery sand (see figure 6.29).

Both layers (59) and (61) continued to a depth of c. 0.98m, where they were seen to overlie a uniform mid greyish orange silty sand layer (71), which continued to a depth of 1.29m. This layer contained only a few sherds of pottery and very occasional flecks of charcoal, and was seen to mark the earliest evidence for human activity in this trench. Below this, a series of three undisturbed natural horizons were identified. A mid yellow grey sand (72) continued to a depth of 1.54m, below which was a clear horizon of white sand with brown silty clay mottling (73), extending to a depth of 1.89m. The final layer was a mid grey sand with silty clay mottling, which was excavated to a depth of 2.28m.

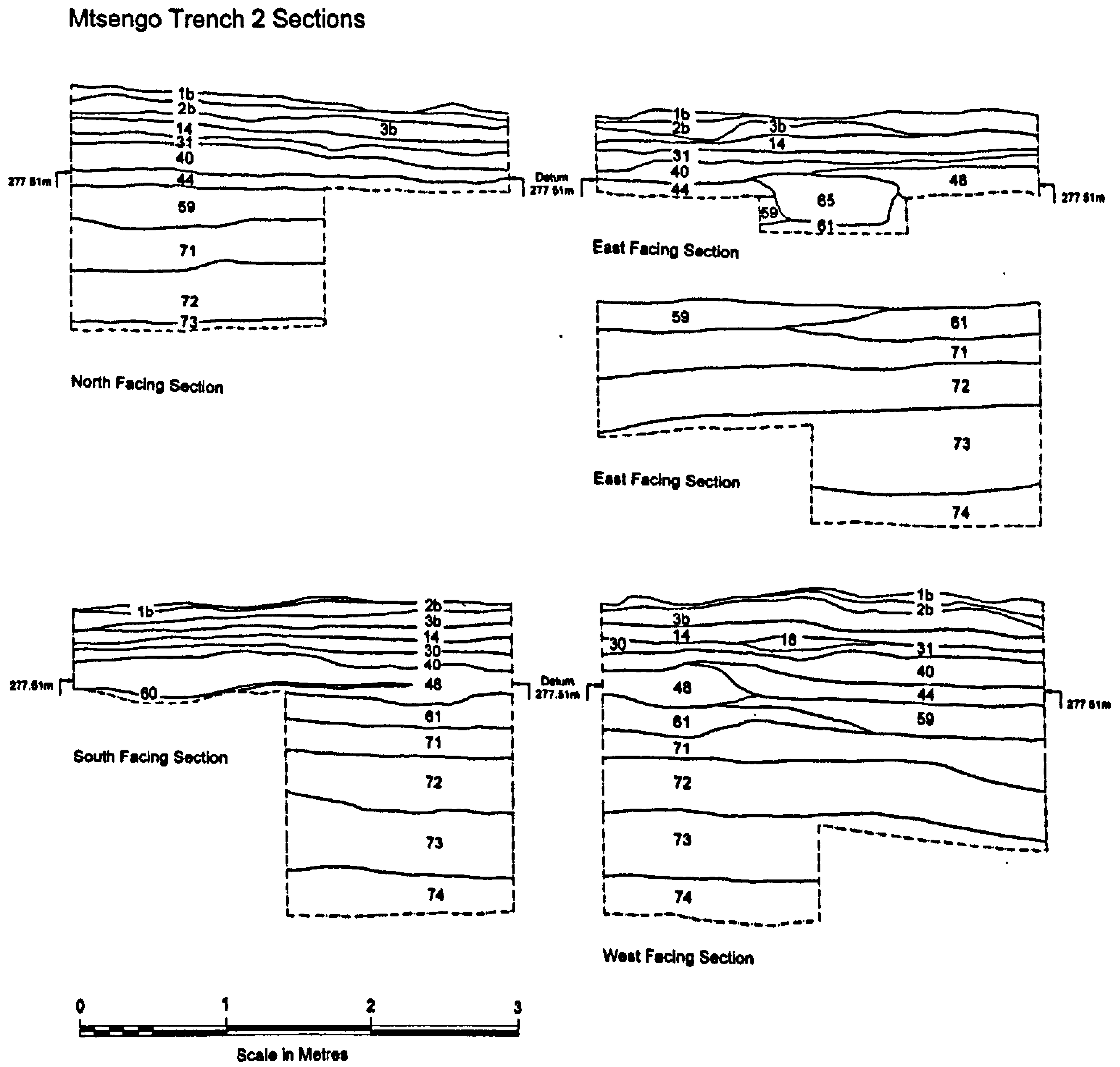
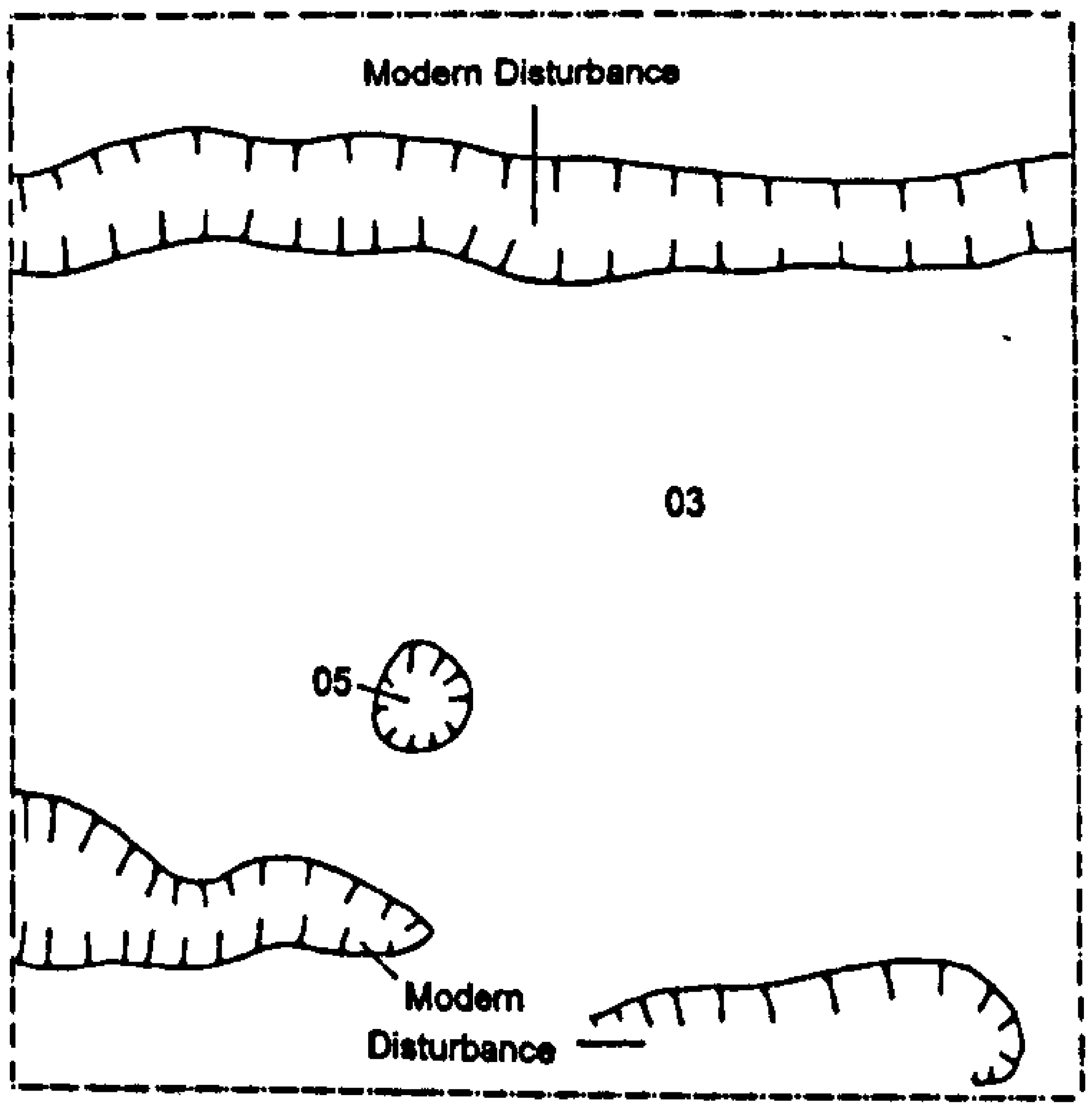
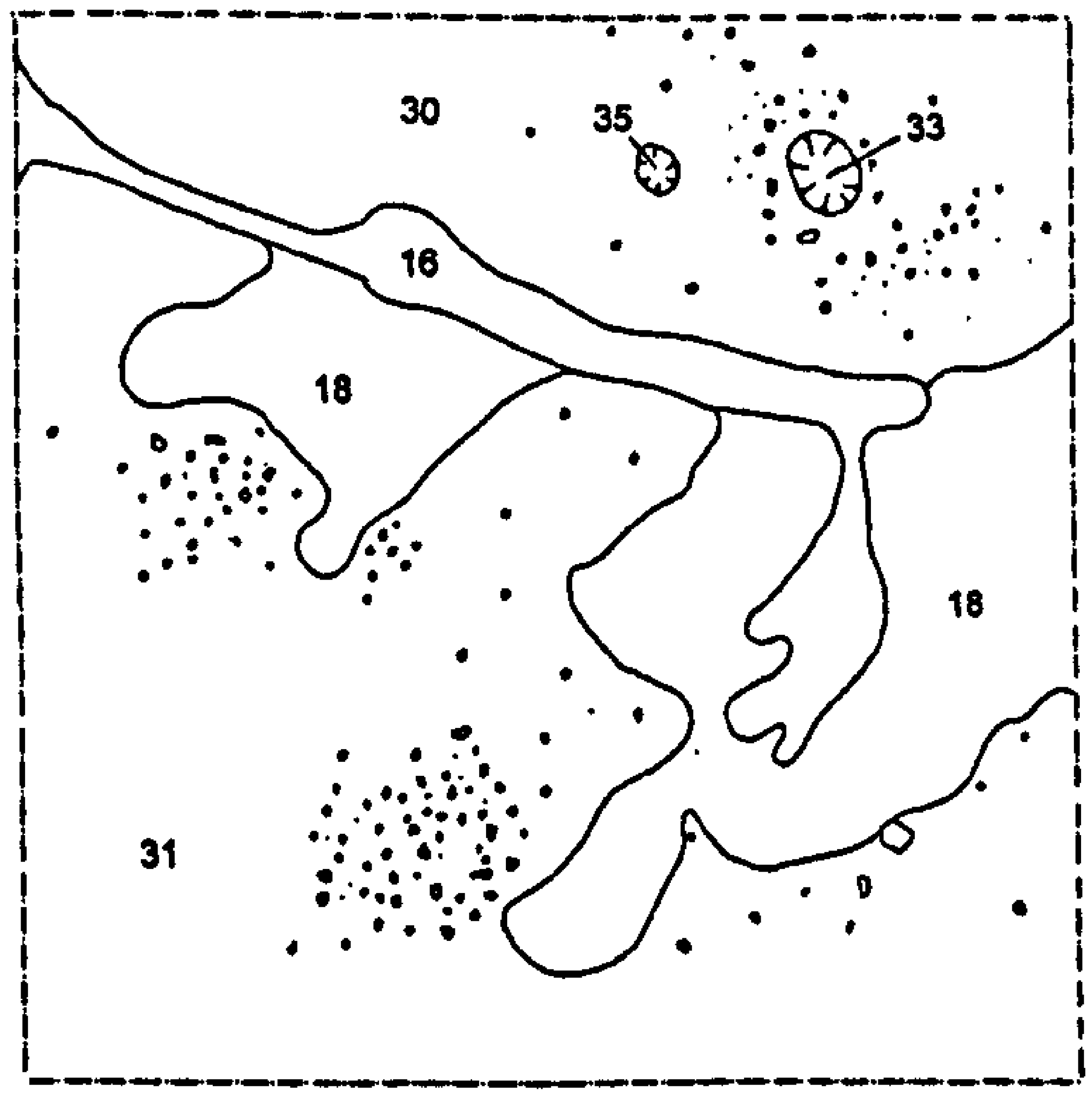


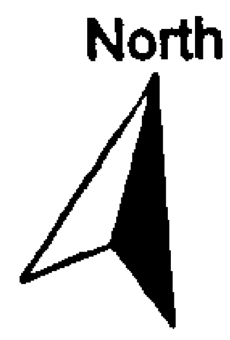
Figure 6.28 Mtsengo 01 Trench Two sections

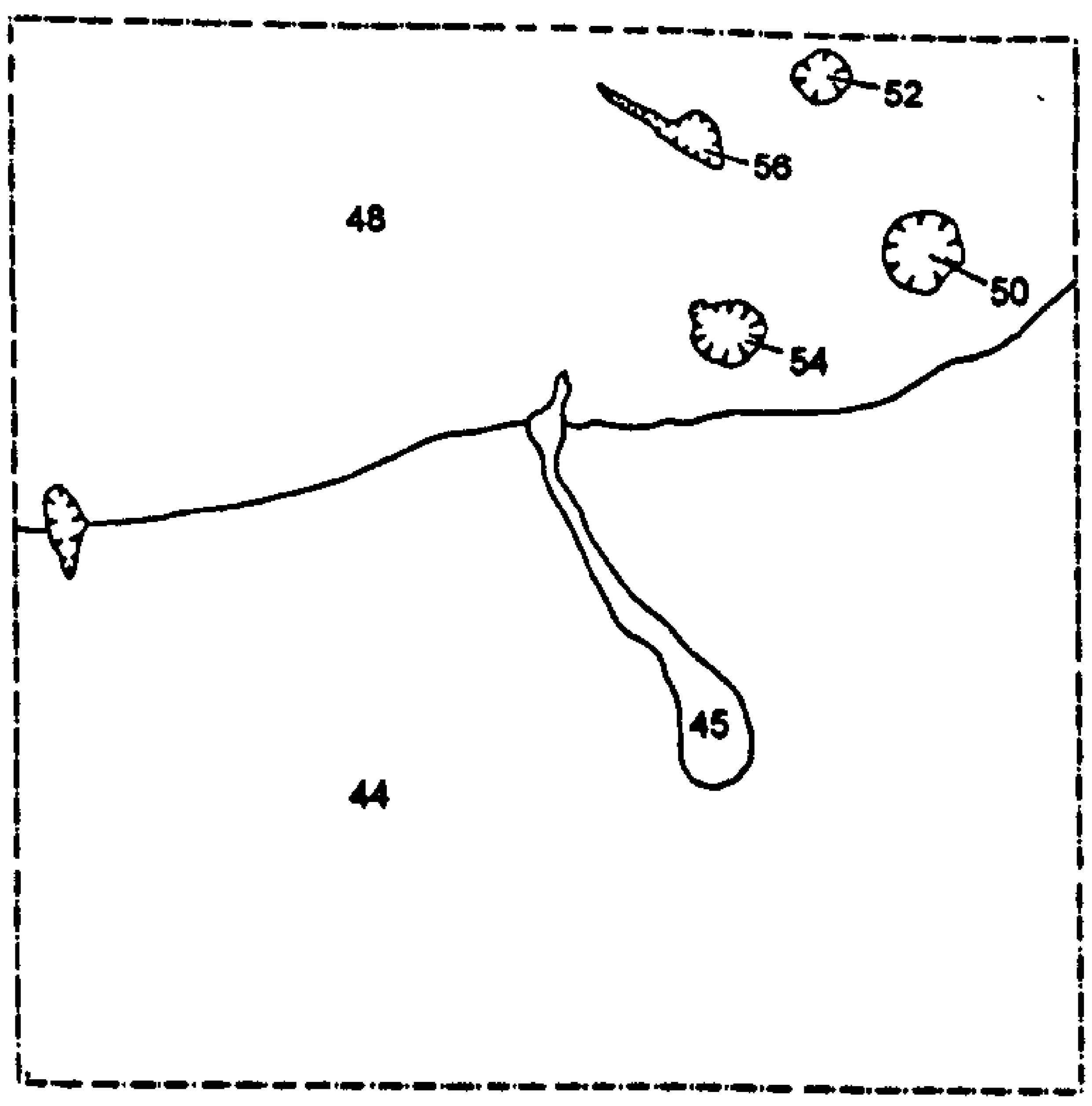


Mtsengo Trench 2

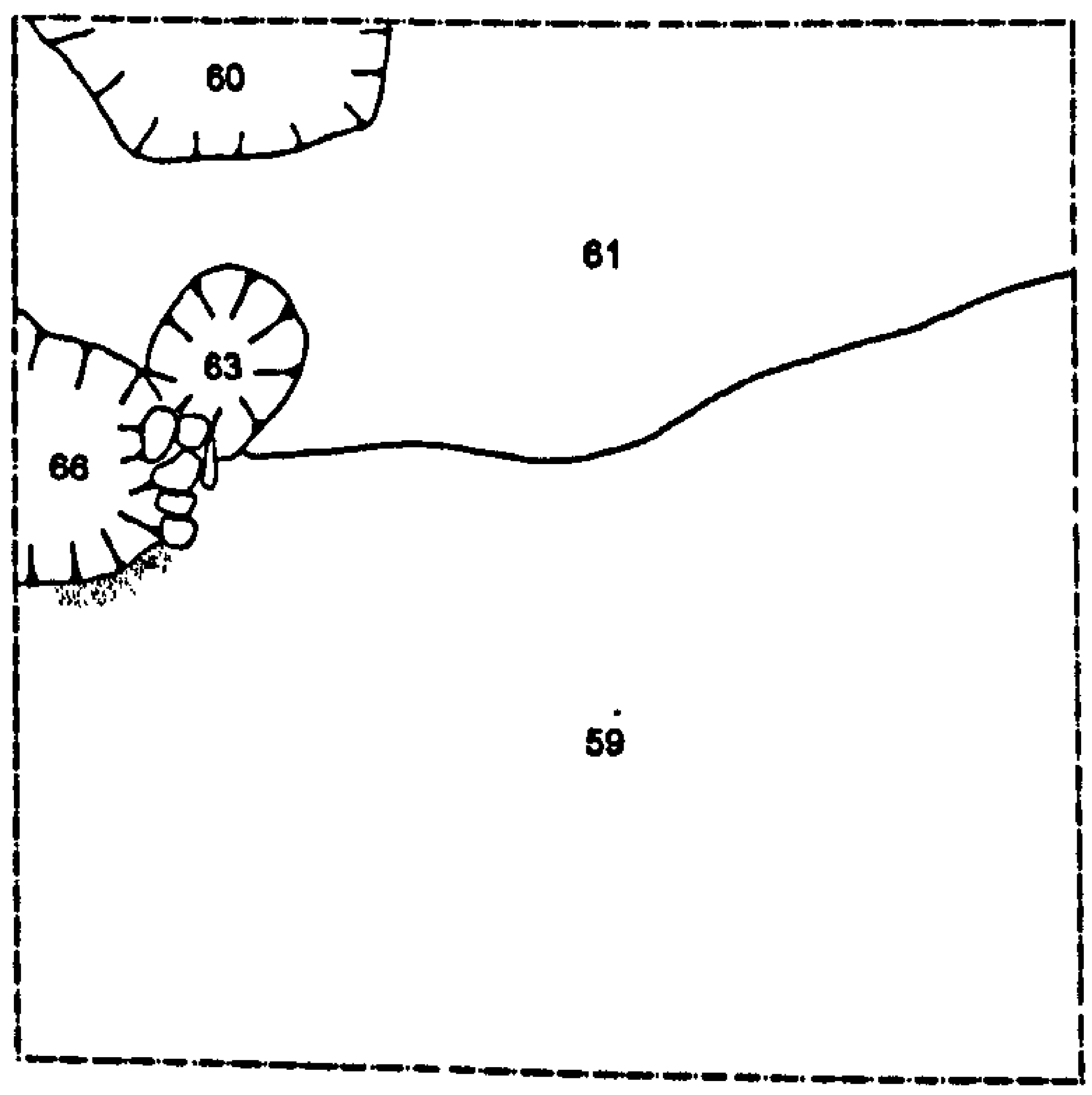


Mtsengo Trench 2





Mtsengo Trench 2



Mtsengo Trench 2

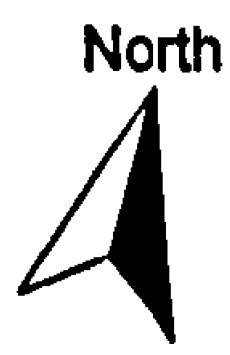


Figure 6.29 Mtsengo 01 Trench Two plans

6.5.3 Trench Three

Trench Three was situated 20m west of Trench Two. An area measuring 3m by 3m was excavated (see figure 6.30). The cultivated topsoil was again seen to have two distinct horizons, as identified in trenches one and two: a loose mid greyish brown silty sand (1c), overlying a darker greyish brown silty sand (2c), continuing to a depth of 0.39m. Both contexts contained pottery, bone, iron-slag and tuyere fragments. Two whetstones (made from Maji-ya-Chumvi sandstone) were also collected from layer (2c).

Below these topsoils, a mid greyish orange silty sand layer (17) was seen to be spread over the northern half of the trench. Four post-holes (cuts 20, 22, 24 and 28) were seen to have been cut into this layer, closely spaced in pairs, some 1.20m apart, their structural function unclear. Below layer (17) a mid yellowish brown silty sand (36), was seen to continue to a depth of 0.61m, before gradually merging into a light yellowish brown silty sand (42). Both layers were seen to have pottery and bone, but the quantity was seen to decrease with depth. Layers (17) and (36) were seen to have iron-slag, layer (17) also had a single drawn Indian red glass bead. However, the overall quantity of finds from Trench Three are considerably less than those seen in either Trench One or Trench Two.

Below layer (42), a light brown silty sand was encountered (43). No pottery was found in this layer, but a few bone fragments and a single fragment of copper roll were recovered. This layer continued to a depth of 1.12m, and was seen to overlie a light yellow orange natural sand subsoil (47). This was seen to be a slightly different natural subsoil as was seen from trenches one and two, and this is presumably because the duration of occupation in Trench Three appears to have been notably shorter. Layer (47) was excavated to a final depth of 1.20m.

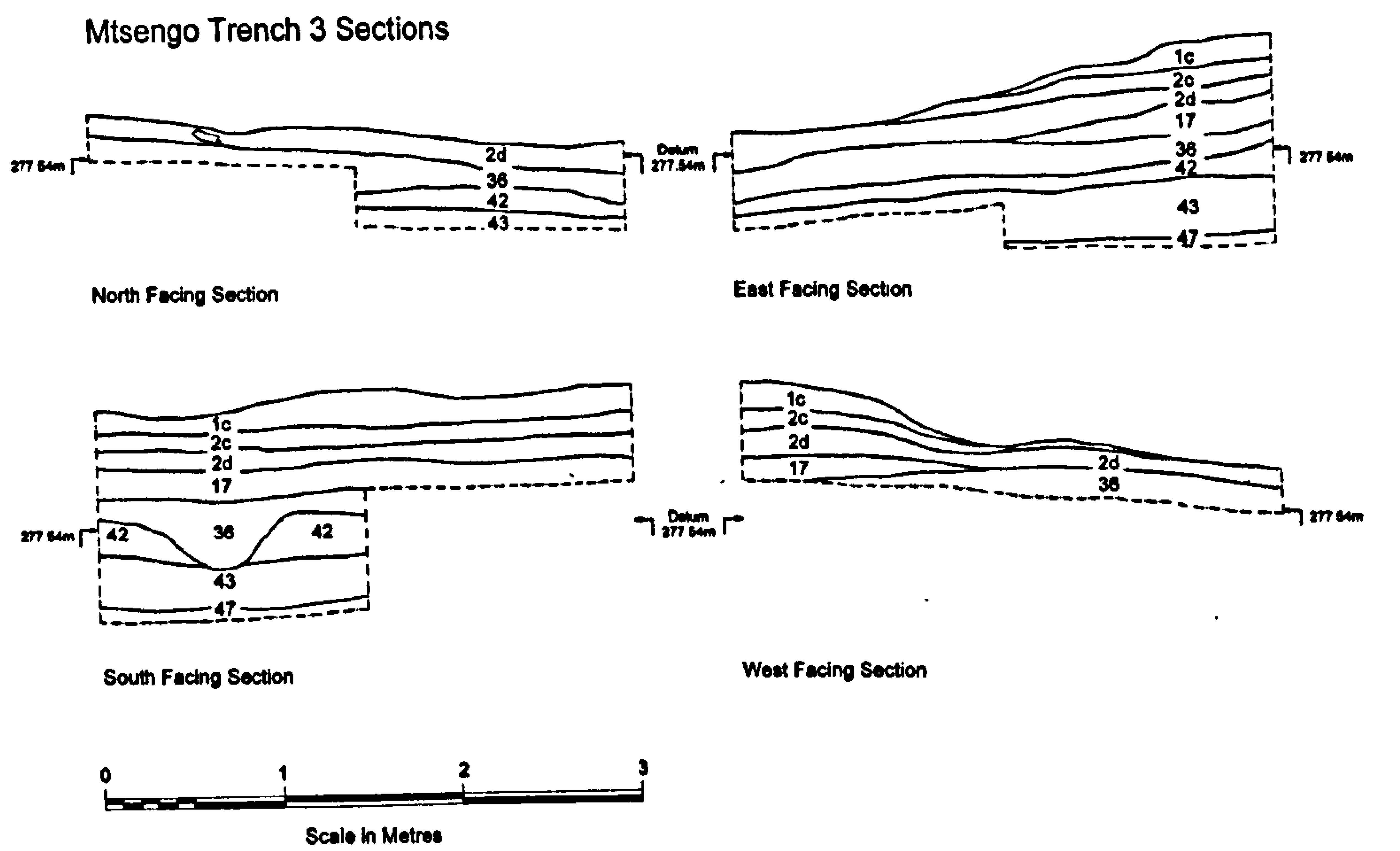


Figure 6.30 Mtsengo 01 Trench Three sections

6.5.4 Finds

The excavated finds from the site of Mtsengo 01 are summarised in table 6.4 below. A total of 21,648 sherds of pottery were excavated from the three trenches, 4,013 of which were seen to be diagnostic and retained for further analysis. Amongst these, later TT/TIW attributes were seen to be predominant, suggesting the main phase of occupation took place in the later iron-working, farming period (see figure 6.31). However, the presence of early TT/TIW and some very few sherds exhibiting attributes commonly associated with earlier Kwale Ware might well suggest that the initial occupation had begun at least during the middle iron-working, farming period (see Chapter 7).

Of all the five sites excavated, Mtsengo had the largest and best preserved faunal assemblage. A total of 6,413 bone fragments were collected including both domestic and wild species, which would suggest that this community practised a mixed subsistence economy. These are described in Chapter 8 (see section 8.5). Of interest, was a complete goat (*Capra hircus*) metacarpal fashioned with a hole 0.67 cm in diameter near its proximal end recovered from Trench Two, and a heavily worn leopard canine, with a hole drilled at its root, found in Trench Three; both were perhaps used as magical pendants or talismans.

Mtsengo 01		Pottery		Iron							Copper					Beads						Glass	Stone		Gum/Bone		
Trench	Context	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
1	1a	55	481						1																		85
	2a	76	603						11	1																	154
	06	9	52						2																		19
	08	2	17						15				1														9
	10		4																	1							
	12	17	79						3																		32
	39	5	68						2						1							1					22
	3a	208	814													1				2							287
	29	477	2657						33		2		1						4	1	1			2			1076
	46	347	1668					1	6		1				1												353
	57	437	1942					2	12				1	1			1	1									595
	58	44	189	1								3					2										67
	64	249	1416				1		3																1		571
	68	8	29																								25
	67	65	298						6																		31
2	1b	296	654						-22																		351
	2b	142	576						15																		266
	04		1																								
	3b	81	165						17																		261
	14	109	486						32		1		1							1							178
	16	7	28						6																		6
	30	122	416						46	3	2				1												117
	31	48	196						47	1																	171
	40	180	525		1				10	1																	136
	49	1	5																								1
	51		1																								3
	53		1																								2
	48	135	658			1			20	2																1	30
	62		2																								
	65	2	14																								3
	59	63	463						4																		398
	61	26	192																								142
	71	4	14																								
3	1c	41	143						3	3																	14
	2c	469	1234						42	1													2			1	333
	19	1	11																								9
	21		6																								6
	17	193	846						18										1								274
	36	80	512						11																		216
	42	13	169																								136
	43										1																6
	Total	4013	17635	1	1	1	1	3	387	12	7	3	4	2	3	1	3	1	5	5	1	1	2	2	1	2	6413

Table 6.4 List of materials from Mtsengo 01 by trench and context

Notes: **a** diagnostic pottery, **b** non-diagnostic pottery, **c** iron blade, **d** iron nail, **e** iron hoe, **f** iron arrow, **g** iron fragment, **h** iron-slag, **i** tuyere, **j** copper roll, **k** copper coil, **l** copper bead, **m** copper link, **n** copper fragment, **o** shell bead (spheroid), **p** shell bead (disc), **q** shell bead (cylinder), **r** glass bead (short drawn, indian red), **s** (medium drawn, Indian red), **t** glass bead (long drawn, indian red), **u** glass rim (dark blue-black), **v** whetstone, **w** rubbing stone, **x** gum copal, **y** worked bone, **z** bone

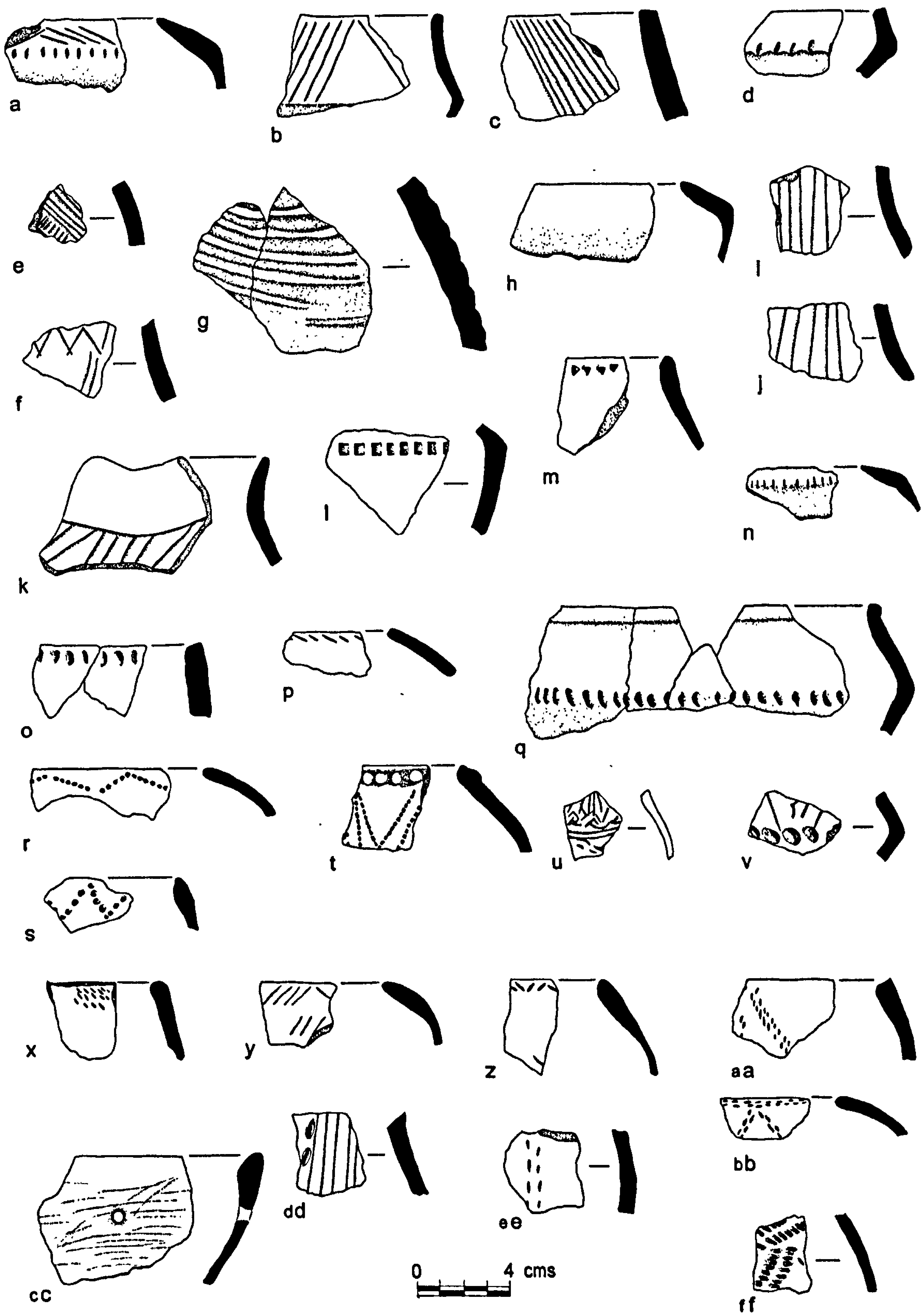


Figure 6.31 Selected late TT/TIW pottery sherds from Mtsengo 01

Mtsengo was also seen to have a large quantity of iron-slag. In all, a total of 387 pieces were collected, with a total weight of 6,385 gm. Associated with this were 12 fragments of clay tuyere, both of which together indicate the on-site production of iron. A number of iron artefacts were collected from Trenches One and Two. These included an iron blade, an iron nail, a well-preserved tanged iron hoe, and an iron arrow-head, in addition to 3 smaller unidentified iron fragments (see figure 6.32).

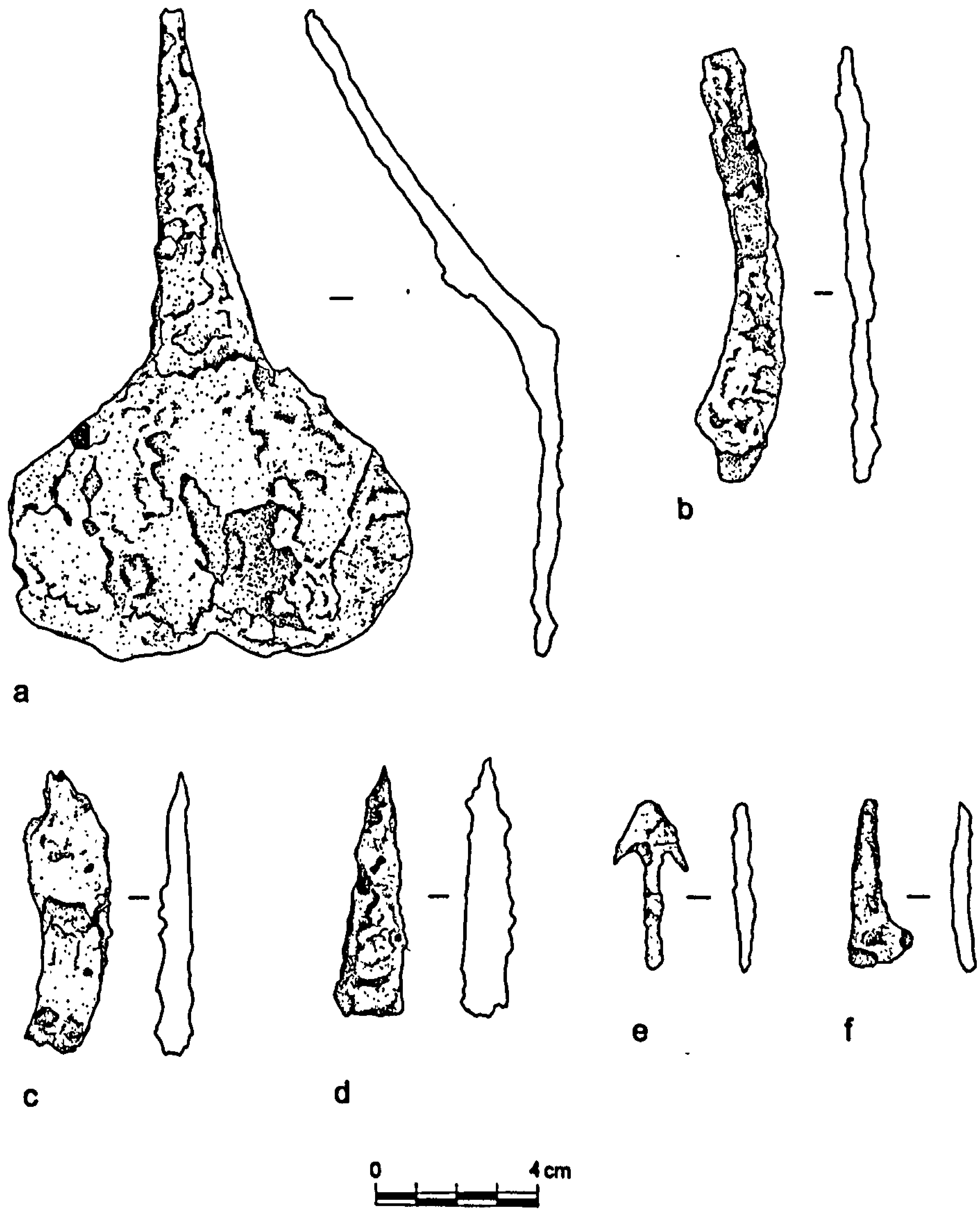


Figure 6.32 Iron artefacts from Mtsengo 01

a hoe blade, from trench 2 (48); **b** knife blade, from trench 1 (58); **c** knife blade, from surface; **d** blade, from trench 1 (57); **e** arrow head, from trench 1 (56); **f** tang of knife, from trench 2 (40).

A further significant feature is the presence of copper artefacts, and the possible evidence for on-site copper working. Copper alloy artefacts are commonly found on littoral sites with TT/TIW pottery, and there is good evidence that this material was at least reworked by the local coastal inhabitants from the 9th century AD onwards (Chami, F. 1994: 44; Chittick, N. 1974: 438-59; 1984: 203-12; Horton, M. 1996: 358-362, Sinclair, P. 1982: 162). Artefacts identified at Mtsengo included 7 copper rolls, 3 copper wire coils, 4 copper beads, 2 copper links and 3 other unidentified copper fragments (see figure 6.33).

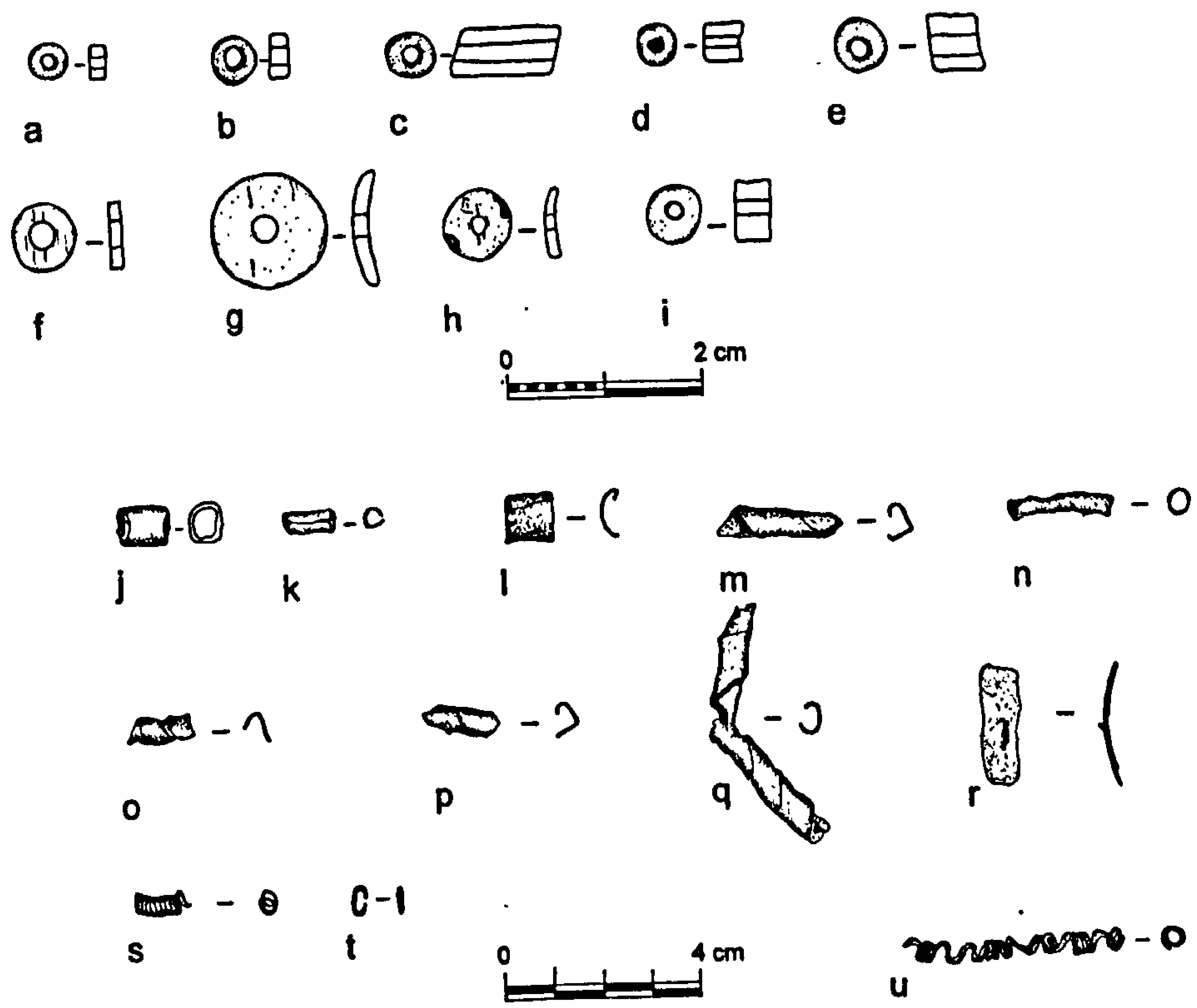


Figure 6.33 Beads and copper artefacts from Mtsengo 01

a glass bead, short drawn cylinder, Indian red, from trench 1 (17); **b** glass bead, short drawn cylinder, Indian red, from trench 1 (29); **c** glass bead, long drawn cylinder, Indian red, from trench 1 (29); **d** glass bead, short cylinder, Indian red, from trench 1 (03); **e** glass bead, medium drawn cylinder, from trench 1 (03); **f** shell bead, small disc, from trench 1 (57); **g** shell bead, large disc, from trench 1 (58); **h** shell bead, small disc, from trench 1 (58); **i** shell bead, short tubular, from trench 1 (57); **j** copper bead, from trench 1 (08); **k** copper bead, from trench 2 (14); **l** copper bead, fragment, from trench 02 (14); **m** copper roll, from trench 1 (29); **n** copper roll, from trench 1 (46); **o** copper roll, from trench 3 (43); **p** copper roll, from trench 3 (30); **q** copper roll, from trench 1 (29); **r** copper fragment, from trench 1 (46); **s** copper wire coil, from trench 1 (58); **t** copper link, from trench 2 (44); **u** copper wire coil, from trench 1 (58).

Both local shell, in the forms of discs, spheroids and cylinders, and imported Indian red 'trade wind' glass beads were found throughout the excavated horizons (see figure 6.33). In addition, two whetstones (made of local Maji-ya-Chumvi sandstone) and two rounded rubbing stones (one made of local quartz stone, the other a syenite, typical of Jombo Hill in Kwale District, some 90 km south of Mtsengo) were recovered from Trenches One and Three (see figure 6.34). One fragment of gum copal and 14 cowrie shells were also collected.

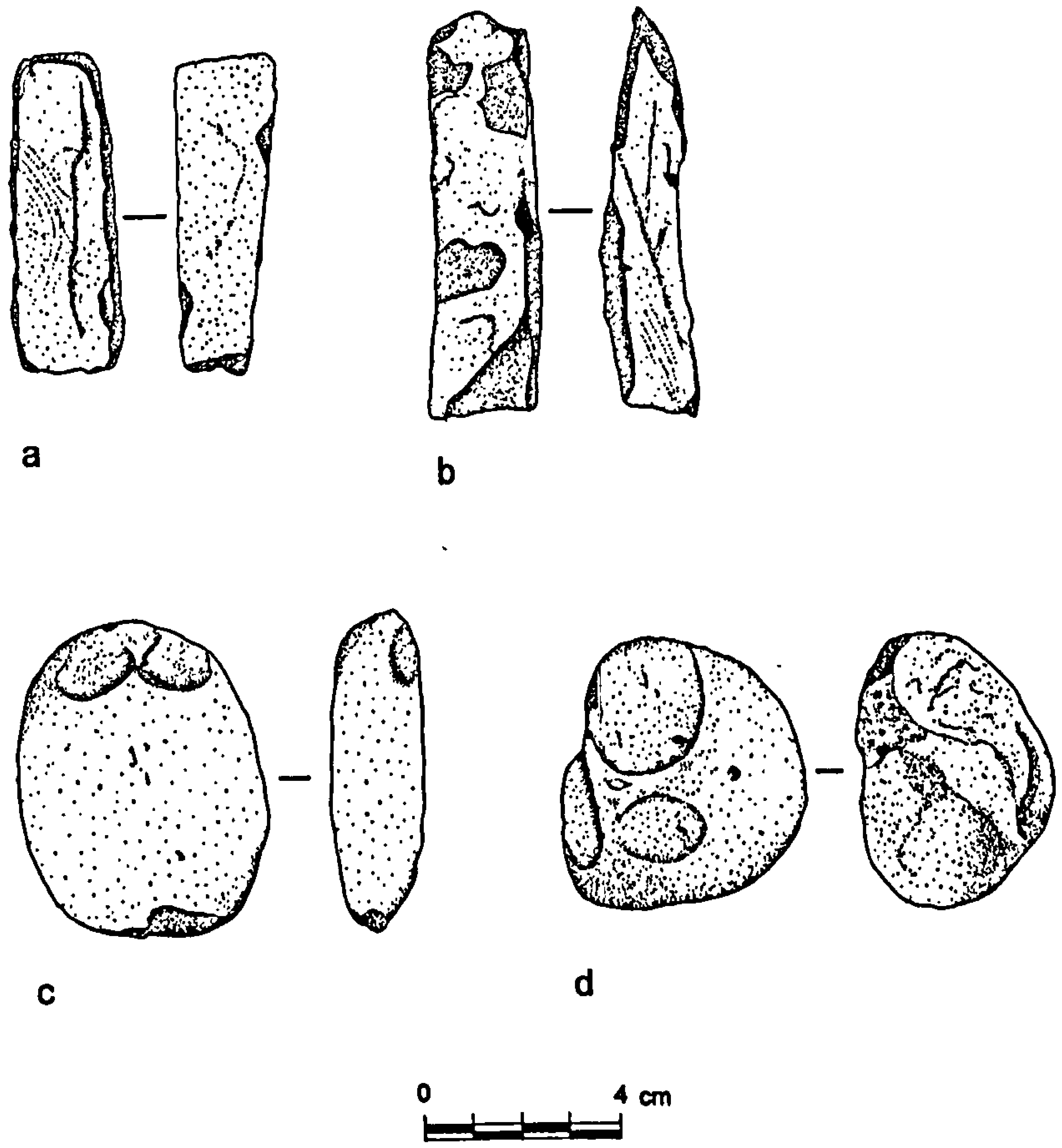


Figure 6.34 Stone artefacts from Mtsengo 01

a whetstone, greenish grey Maji ya Chumvi sandstone, from trench 3 (02); **b** whetstone, greenish yellow Maji ya Chumvi sandstone, from trench 3 (02); **c** rubbing stone, light orange yellow quartz, from trench 1 (29); **d** rubbing stone, dark blue grey syenite (Dzombo, Kwale), from trench 1 (29).

6.5.5 Summary

Excavation at Mtsengo has demonstrated an intensive and long-lived settlement. Trenches One and Three have both shown a complex stratified sequence of occupied layers, house floors, pits and other structural features spanning the later half of the middle iron-working, farming period to the later iron-working, farming period. This occupation was seen to have been continuous, with no convincing evidence for the sites abandonment or reoccupation being found. It would therefore seem that the archaeological evidence from Mtsengo directly contradicts the impression given by local oral traditions that this site was only temporarily occupied by Mijikenda communities who were still fleeing the aggressive Galla pastoralists. Excavation of Trench Three showed an equally intensive, if slightly later occupation.

The excellent preservation of the observed settlement structures and the site's deep stratigraphy is noteworthy. Whilst the size of the excavation trenches has restricted our interpretation to a primarily vertical interpretation of the data, Mtsengo clearly has excellent potential for further investigation, notably in the exploration of the internal spatial organisation of these early coastal hinterland settlements.

6.6 Mbuyuni 01 (HhJw1): site description and excavation

Survey of Kenya Map Sheet: 198/3 UTM zone 37M 559149 9563598
Lat. 3° 56' 57" S 39° 31' 53" E
Survey Region: Rabai
Socio-Natural Zone: Rabai Upland

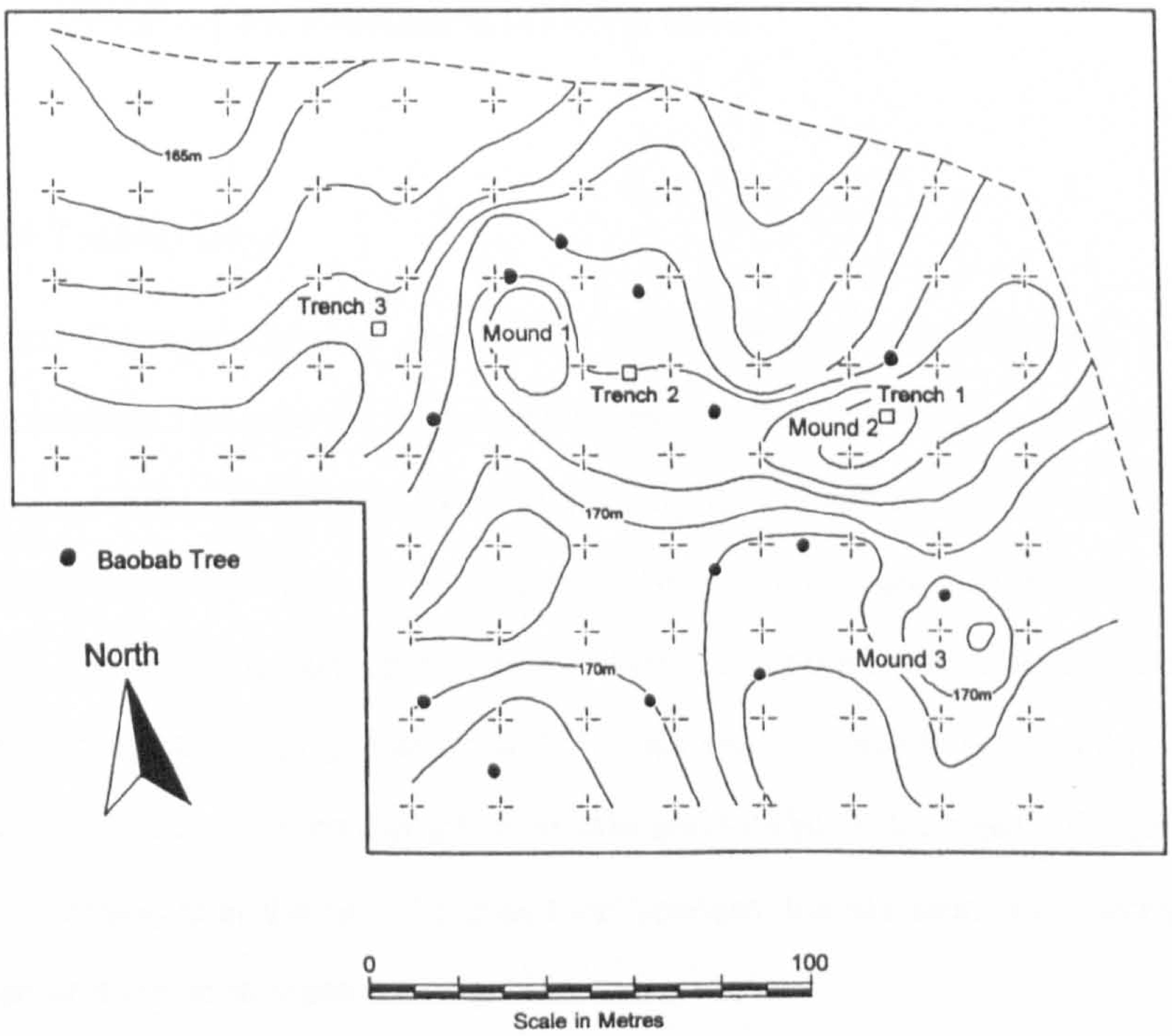
The site of Mbuyuni 01 sits on a flat plateau of the Rabai Uplands, some 170m above sea level, between the rivers Darajani to the north, and the Mwache to the south. The surrounding area is characterised by well-drained sandy clay Bay deposits, covered with grass and scrub land grazed by cattle. Along the valley slopes the area is commonly cleared for cultivation, though the soil is poor. However, less than 5 km to the east at Mazeras, this landscape rapidly changes, to coconut plantations, arable land, and the still forested hill slopes of Rabai, found in the Kaloleni Upland (see figure 5.9).

The first archaeological reconnaissance of Mbuyuni was carried out by Soper in 1966, during which he was told that this site was the first Kaya to be established by the Duruma Mijikenda. This was the story also related to Griffiths in the early part of the 20th century (Griffiths, J. 1935: 267), and to myself, during fieldwork in 1997. In addition, Spear's informants also referred to a 'Kaya Mubuyuni' in Duruma land, being occupied by the Kambe Mijikenda on their way from Kaya Digo (Kwale) to Kaya Ribe (Spear, 1978: 32; 1982: 113). Kaya Mbuyuni is now privately owned, the reputed protective forest has been removed, and the land put under cultivation, despite protests from local Duruma elders.

Kaya Mbuyuni was said to have been founded by the Mrima, a Duruma patriclan, which is seen to be subdivided into seven sub-clans (see Spear, T. 1978: table ii). Originally all seven sub-clans were said to have lived at Mbuyuni. However, as time passed, different sub-clans left Mbuyuni to form their own separate Kaya. Of these, only the Nyota sub-clan is said to have remained behind at Mbuyuni. Each sub-clan now holds responsibility for their own individual Kaya (Willis, J. 1996: 94).

The remaining Mwanyota elders of Mbuyuni claim that there were originally seven gates into the Kaya, one for each of the sub-clans, and each protected by a *fingo* or magic charm. In addition, five further *fingo* were said to have been buried within the Kaya. Whilst the exact boundaries of the Kaya are no longer visible, the site is notable for its five mounds, each roughly circular with a diameter between 20m and 30m, and approximately 1.5m in height; it is perhaps tempting to equate these mounds with the remaining five buried *fingo*. Indeed mound one is specifically regarded as being the central *moro*, or meeting place of the Kaya, and was until recently protected by a spirit guardian in the form of a large python, which was seen and then understandably driven away by the present landowner.

Mbuyuni 01 Site Plan



Mbuyuni 01 Surface Pottery

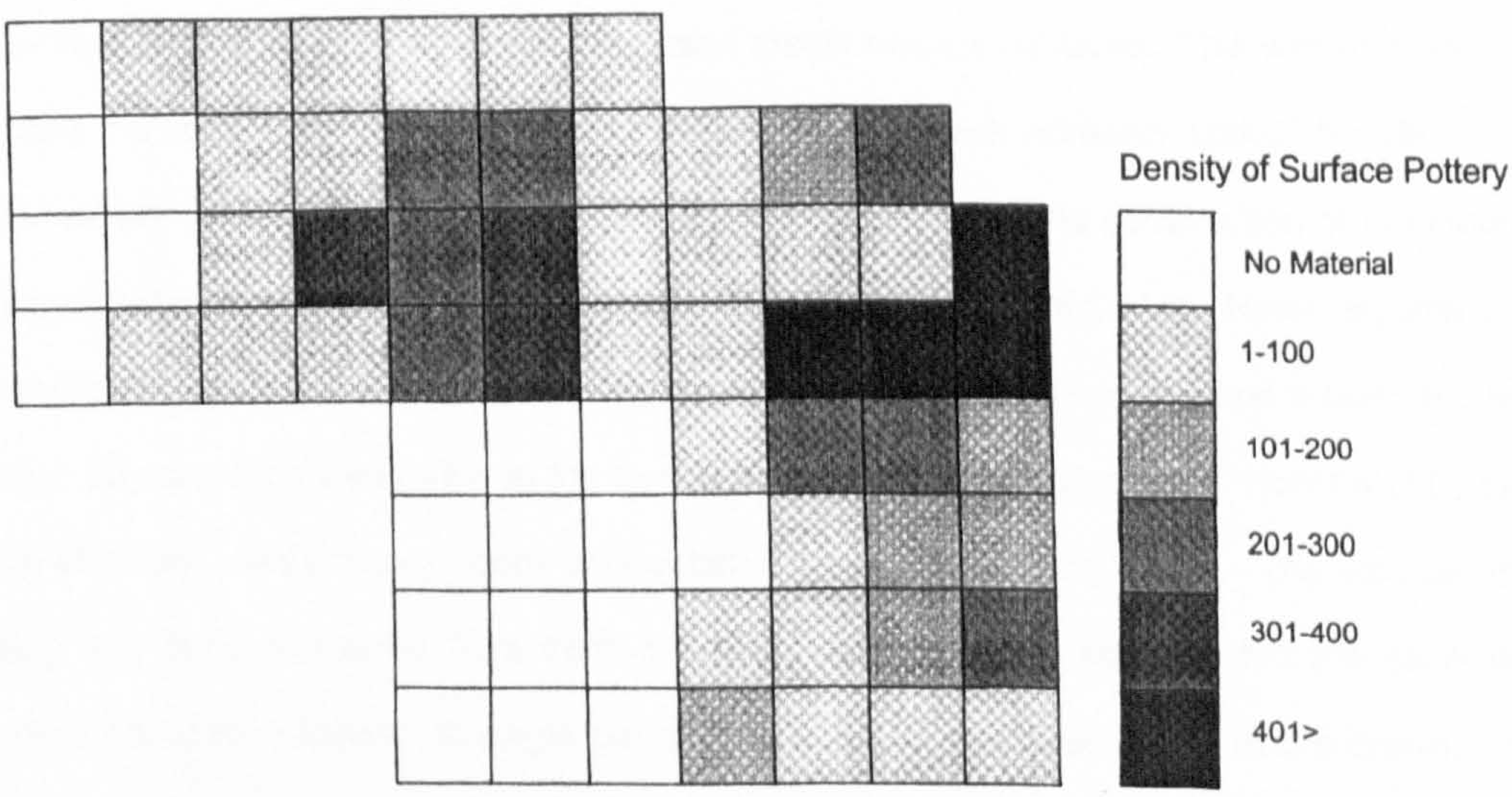


Figure 6.35 Mbuyuni 01 site plan and surface pottery distribution

Soper (1967) had recorded Mbuyuni as being a later iron-working, farming, settlement and this was confirmed through an initial examination of surface pottery. Survey and surface collection was restricted to the north-eastern corner of the Kaya, approximately 4.32 ha in area, between mounds one and three (see figure 6.35). A notable concentration of materials was evident on and around the immediate vicinity of each mound. A total three trenches were excavated, a single trench on the top of mound two, a second trench situated mid-way between mounds one and two, and a third trench, 20 m west of mound one. No excavation was carried out on mound one despite its obvious potential interest, in accordance with the elders wishes. Similarly the landowner did not wish our activities to come too close to their homestead, hence preventing any examination of mound three.

6.6.1 Trench One

Trench One was located on the top of mound two where surface material was seen to be most concentrated. An area 3m by 3m was excavated (see figures 6.36 and 6.37). The topsoil was seen to be a mid greyish yellow silty sand (1a), continuing to a depth of 0.20m, where it was then seen to change in colour to a light greyish yellow silty sand (1b). Both layers (1a) and (1b) were seen to have pottery and bone. Layer (1b) continued to a depth of 0.52m. In the trench's north-western corner, a rectangular grave (08) with accompanying child burial (07), was seen to have been cut into layer (1b). The child's head was orientated 136°, lying on the left hand side and looking to the west, with both arms placed in front, the right arm crossing over the left. To allay local concern, the skeleton was recorded in situ before being covered over, and the north-western corner left unexcavated.

Below layer (1b), a light greyish yellow silty sand matrix was encountered. This was differentiated into three stratified horizons (2a), (2b) and (11) respectively. All three horizons should be viewed as relatively contemporary dumps of intermixed material, purposefully used in the construction of the mound. Horizons (2a) and (2b) were excavated as a single context (02), to a depth of 1.18m. However, later examination of the section suggested a slight differentiation between its upper horizon (2a) and a restricted lens of slightly cleaner silty sand, concentrated on the trenches western edge, below (2b). Horizon (11), excavated to a depth of 1.53m, was similarly poorly differentiated from (2a) and (2b) above. The considerable amount of pottery and bone recovered from each of these horizons would suggest that the earth was dug from previous occupation layers. A single piece of iron-slag, 3 shell disc beads and a drawn, light blue glass bead were all collected from layer (2a).

Mbuyuni Trench 1 Sections

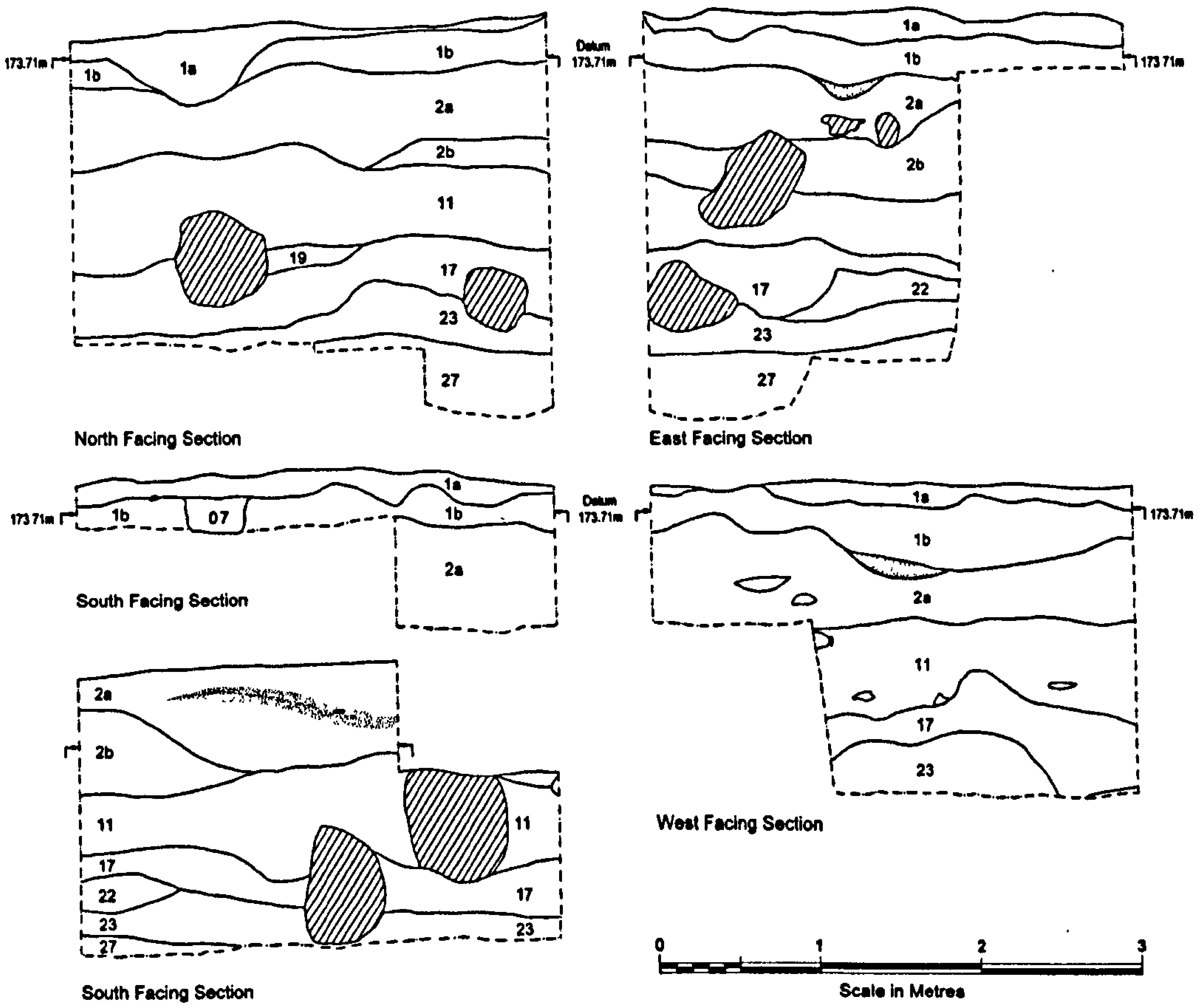


Figure 6.36 Mbuyuni 01 Trench One sections

The lower horizon of this dumped material, layer (11), was seen to overlie a mid yellow brown silty sand (17), extending to a depth of 1.89m. This was seen to represent the pre-mound occupation surface. A circular spread of ash and charcoal (19) lay at the well-defined interface between. This was interpreted as a hearth, its thickness and the presence of multiple lenses of ashy material, suggesting regular burning. A far greater concentration of pottery and bone was recovered from layer (17), in addition to 2 small fragments of iron.

Below layer (17), an area of compact, mid orange brown sandy clay (22) was encountered in the trench's north-west corner. In addition to pottery and bone, frequent fragments of house daub were seen to form, what would appear to be a compact floor surface. Below, and to the south and west of this surface, a light yellow orange sandy clay layer (23) was seen. This was cut by a post-hole (25), 0.12m deep and 0.40m in diameter, presumably contemporary to, and some 0.46m south-east of layer (22). Both pottery and bone were collected from layer (23). However, the quantity of such materials was seen to decrease rapidly with depth. A charcoal sample collected from layer (23) at a depth of 1.76m gave a radiocarbon date range of between the late 15th and mid 17th centuries AD (Pta-7965; see table 6.6).

Layer (23) continued to a depth of 2.12m. Below this, a light yellow orange sandy clay layer was defined (26). Pottery and bone were again present, but restricted to the layer's upper horizon. This layer was excavated to a depth of 2.45m, the matrix becoming gradually more compacted as depth increased. The absence of finds in its lower horizon, and the similarity with layer (21) in Trench Two suggested that we had reached the upper horizon of the natural sandy clay subsoil (27). As a result, the excavation was stopped at a depth of 2.52 m.

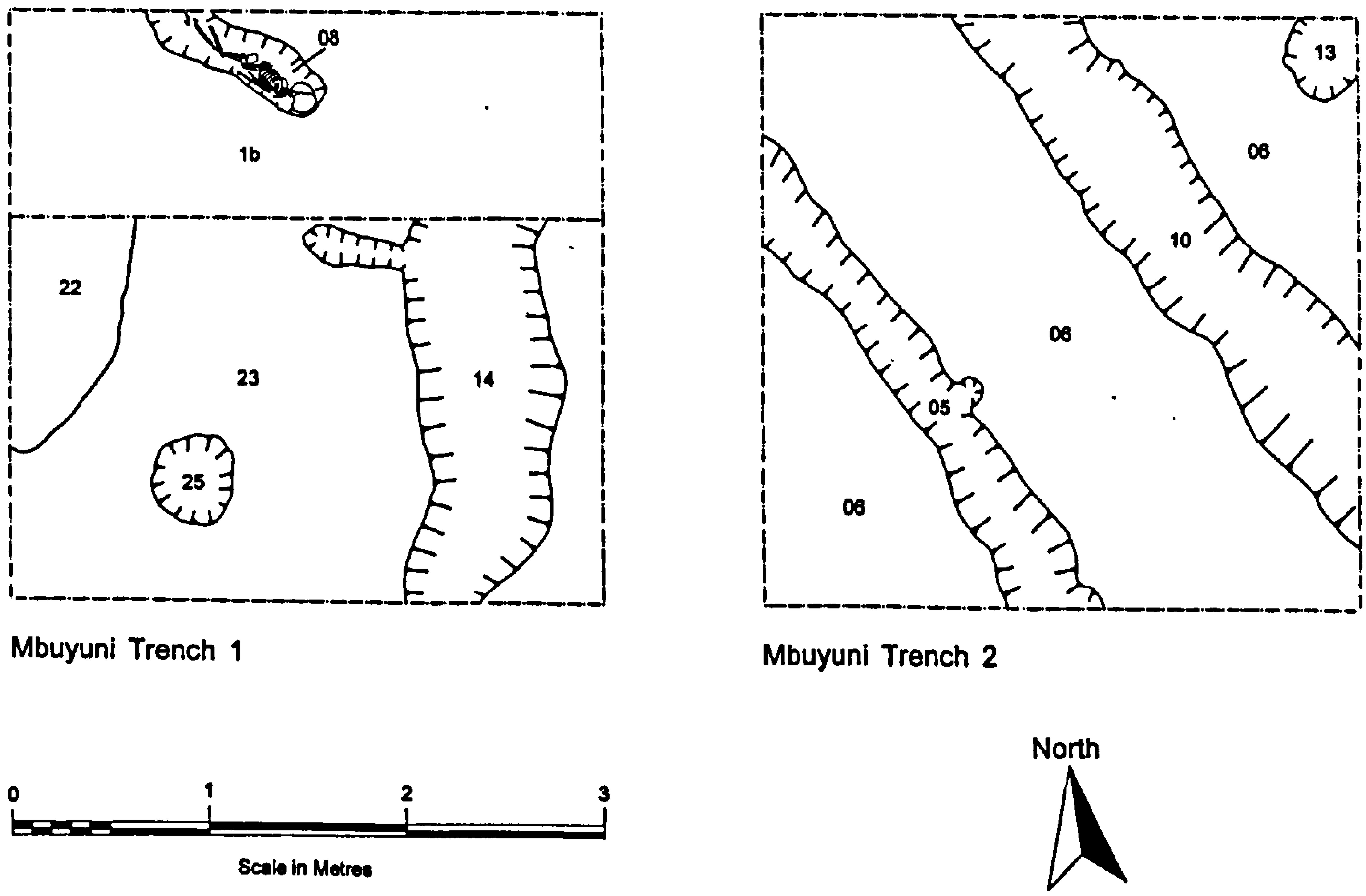


Figure 6.37 Mbuyuni 01 Trench One and Trench Two plans

6.6.2 Trench Two

Trench Two was situated 56 m west of Trench One, on a flat plateau, mid-way between mounds one and two. No surface materials were evident in this area, and the trench was excavated to explore whether this represented an absence of occupation. An area 3m by 3m was excavated (see figures 6.37 and 6.38). The topsoil was a light greyish yellow silty sand (1c), continuing to a depth of 0.20m. Finds included only a few sherds of pottery and a bangle fragment made from copper, reflecting the complete absence of materials observed on the surface.

Below the topsoil, a light yellow sandy clay layer (06) was seen to have been cut by two, possibly three shallow ditches. The first (cut 05), was 0.24m deep and 0.35m wide, and ran parallel on a north-west to south-east alignment, approximately 1.10m west of the larger second ditch (cut 10), which was 0.30m deep and 0.64m wide. In the trench's south-east corner, a possible third ditch (cut 13), 0.13m deep and 0.40m wide, was seen to run on an opposing north-east to south-west alignment, some 0.68m east of the second ditch (cut 10). No finds were found in layer (06), despite continuing to a depth of 0.51m.

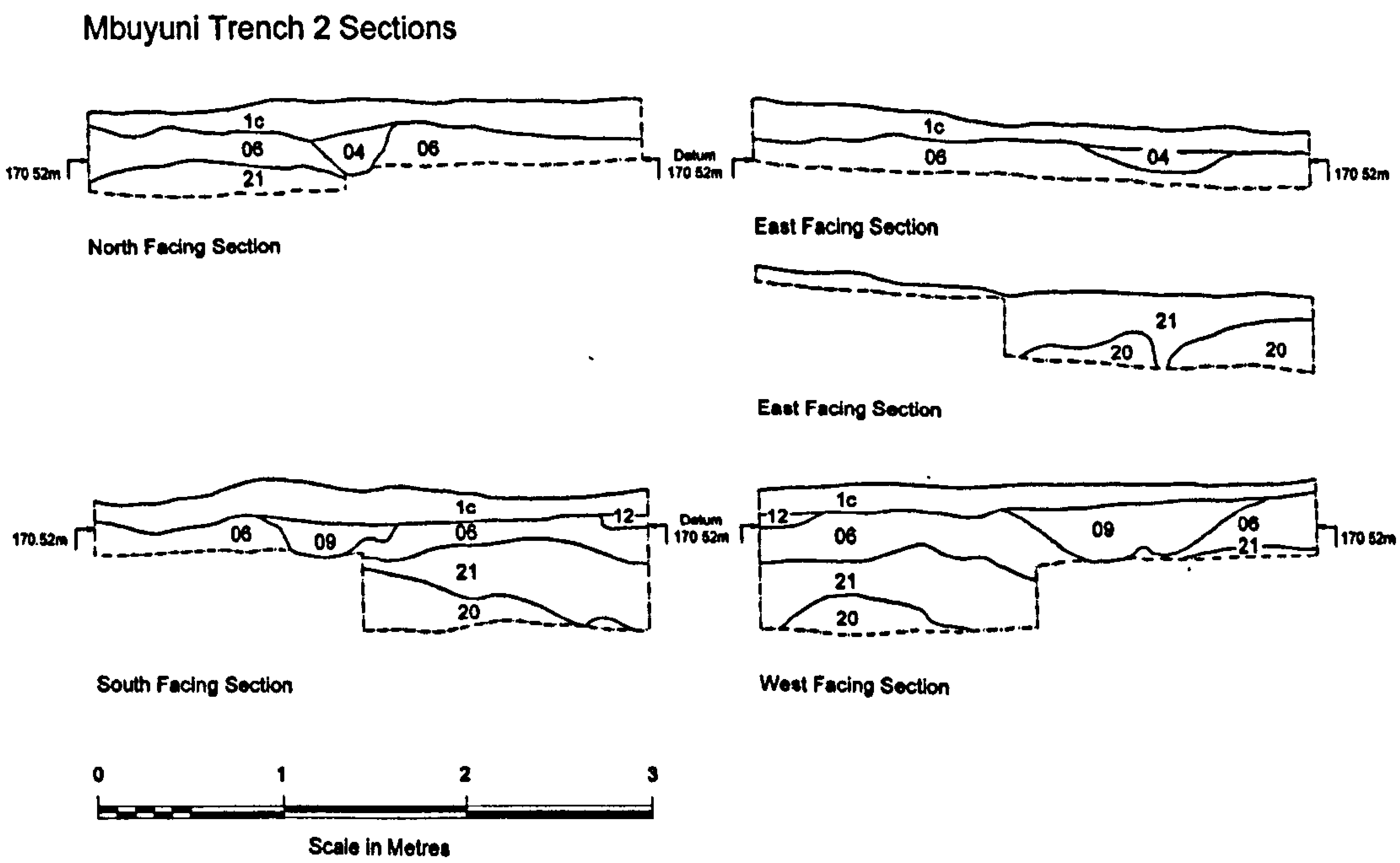


Figure 6.38 Mbuyuni 01 Trench Two sections

A light greyish yellow sandy clay layer (21), with patches of iron mottling was seen to underlie layer (06). Again no finds were recovered from this layer, and its hard compaction suggested that this was the natural subsoil. At a depth of around 0.70m the iron mottling was seen to form patches of hard iron pan above a mid orange yellow, weathered sandstone (20). This was excavated to a final depth of 0.82m.

6.6.3 Trench Three

Trench Three was situated 54m west of Trench Two, on a gentle north-facing slope, west of mound one. A moderate concentration of surface materials was noted, focused around the western slope of mound one.

An area 3m by 3m was excavated (see figure 6.39). The topsoil was seen to be a mid greyish yellow sandy clay (1d), continuing to a depth of 0.20m. Pottery was prevalent throughout this layer, but only a single fragment of bone was recovered.

Below this, the matrix changed to a mid yellowish grey sand clay (03), continuing to a depth of 0.51m. Frequent fragments of house daub were seen to characterise this horizon. A large quantity of pottery and bone was recovered, including a complete restricted plain bowl, placed upside down, the contents of which, including charcoal and bone, were taken for future flotation. Whilst no structural features were identified in this horizon, the quantity of materials recovered would suggest that this layer is part of an occupation surface, perhaps relating to the pre-mound levels of Trench One.

Layer (03) overlay a mid greyish yellow sandy clay (15). Fragments of house daub and charcoal were seen to continue in this lower horizon of occupation. However, no bone, and only very few sherds of pottery were recovered. This layer was seen to continue to a depth of about 0.76m, with a gradual transition into the clean mid greyish yellow sandy clay layer (16) below, differentiated on the basis of a complete absence of cultural materials. This layer continued to a depth of 1.22m, where upon, a light greyish yellow sandy clay layer (18), similar to layer (21) in Trench Two, was reached. This was interpreted as the natural subsoil overlying the sandstone bedrock below. As a result, the excavation was finally stopped at a depth of 1.35m.

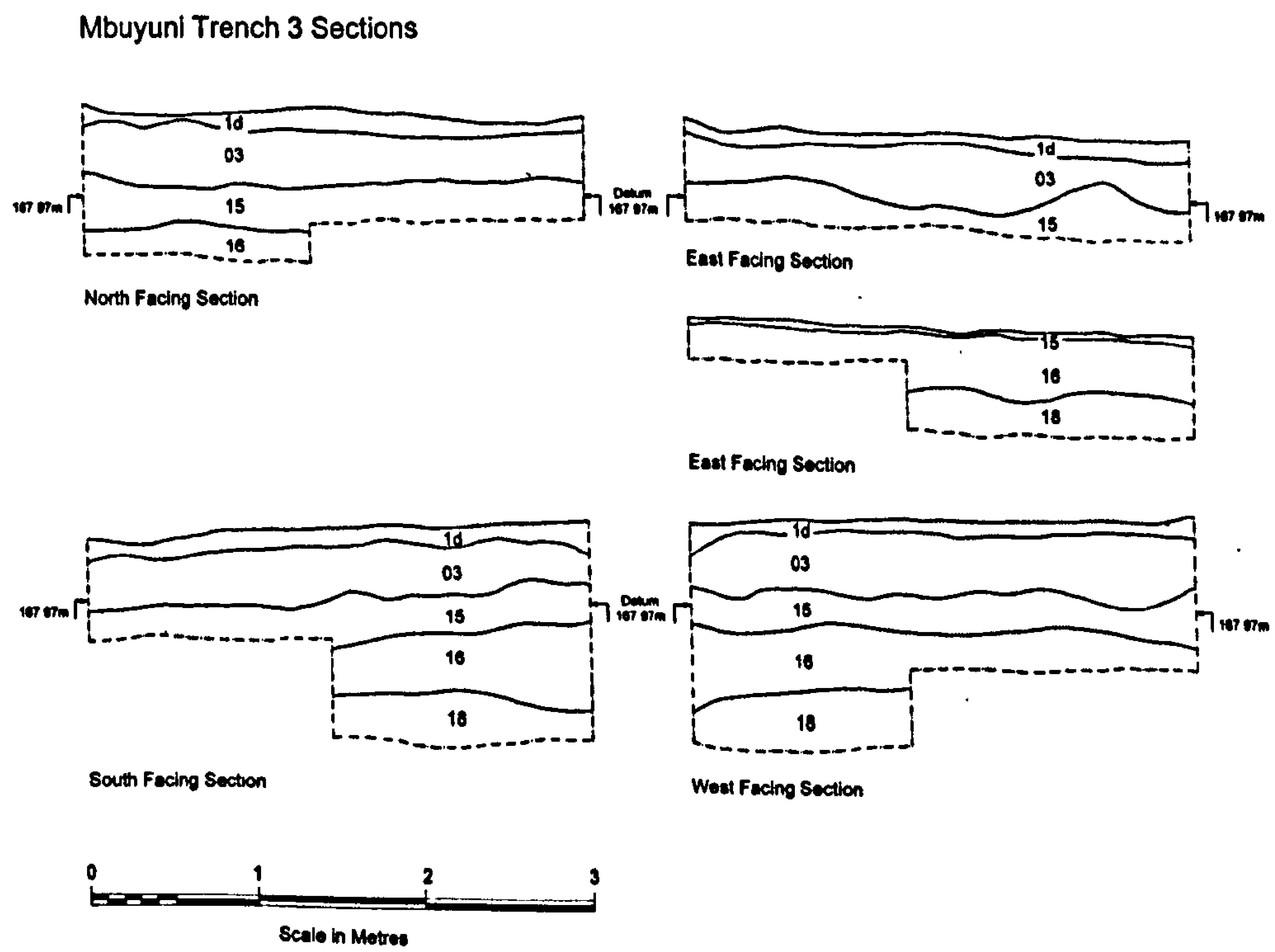


Figure 6.39 Mbuyuni 01 Trench Three sections

6.6.4 Finds

The excavated finds from the site of Mbuyuni 01 are summarised in table 6.5 below. A total of 7,773 sherds of pottery were excavated from the three trenches, 1,100 of which were seen to be diagnostic and retained for further analysis. Local late TT/TIW attributes are predominant in the collected assemblage, suggesting that the occupation of this settlement took place during the later iron-working, farming period (see figure 6.40 and Chapter 7). The excavations also gave a fair sized sample of faunal materials, with a total of 2,545 bone and shell fragments being collected. These included mainly domesticated species, with some hunted and gathered wild fauna, reflecting the practise of a mixed subsistence economy (see section 8.6).

Very few special finds were collected. Evidence for the production and use of metals were present, all be it minimal. A single piece of iron-slag was collected from Trench One, along with 2 fragments of an unidentified iron artefact. In addition, a copper bangle was collected from the topsoil of Trench Two. Beads, were equally scarce: a total of 3 shell disc beads and a single short drawn light blue glass bead were recovered from the re-deposited spoil of mound two (see figure 6.41).

Mbuyuni 01		Pottery		Iron		Copper	Beads		Bone
Trench	Context	a	b	c	d	e	f	g	h
1	1a/b	45	154						73
	07	6	17						
	02	230	851	1			3	1	169
	11	158	786						440
	19	5	11						4
	17	440	3244		2				1530
	22	64	374						160
	23	40	210						122
	24	3	12						5
	26	20	108						24
2	1c	2	13			1			
	09		4						
3	1d	42	572						1
	03	44	309						249
	15	1	8						
	Total	1100	6673	1	2	1	3	1	2545

Table 6.5 List of materials collected from Mbuyuni 01 by trench and context

Notes: **a** diagnostic, **b** non-diagnostic, **c** iron-slag, **d** iron fragment, **e** copper bangle, **f** shell bead (disc), **g** glass bead (short drawn, light blue), **h** bone

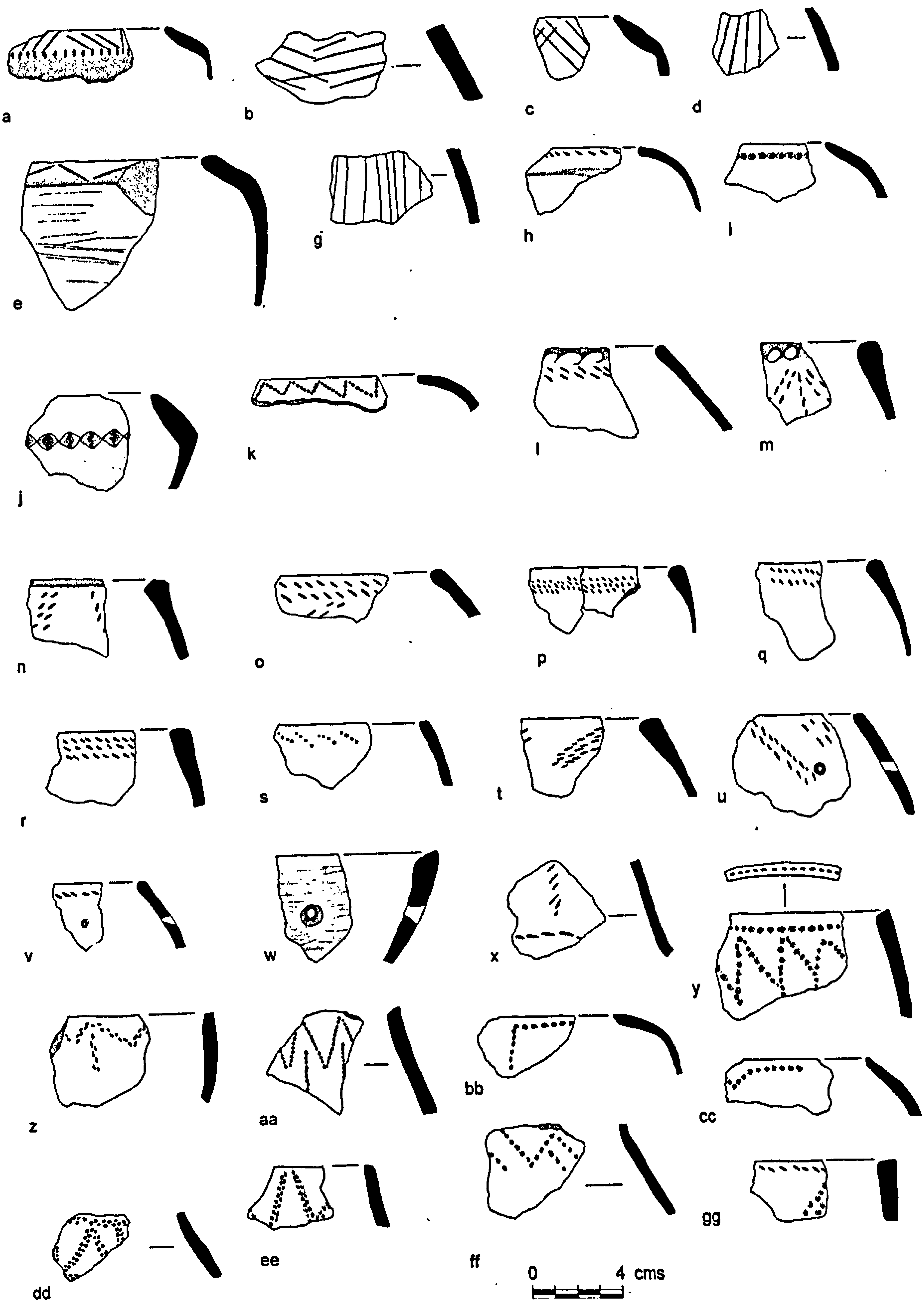


Figure 6.40 Selected late TT/TIW pottery sherds from Mbuyuni 01

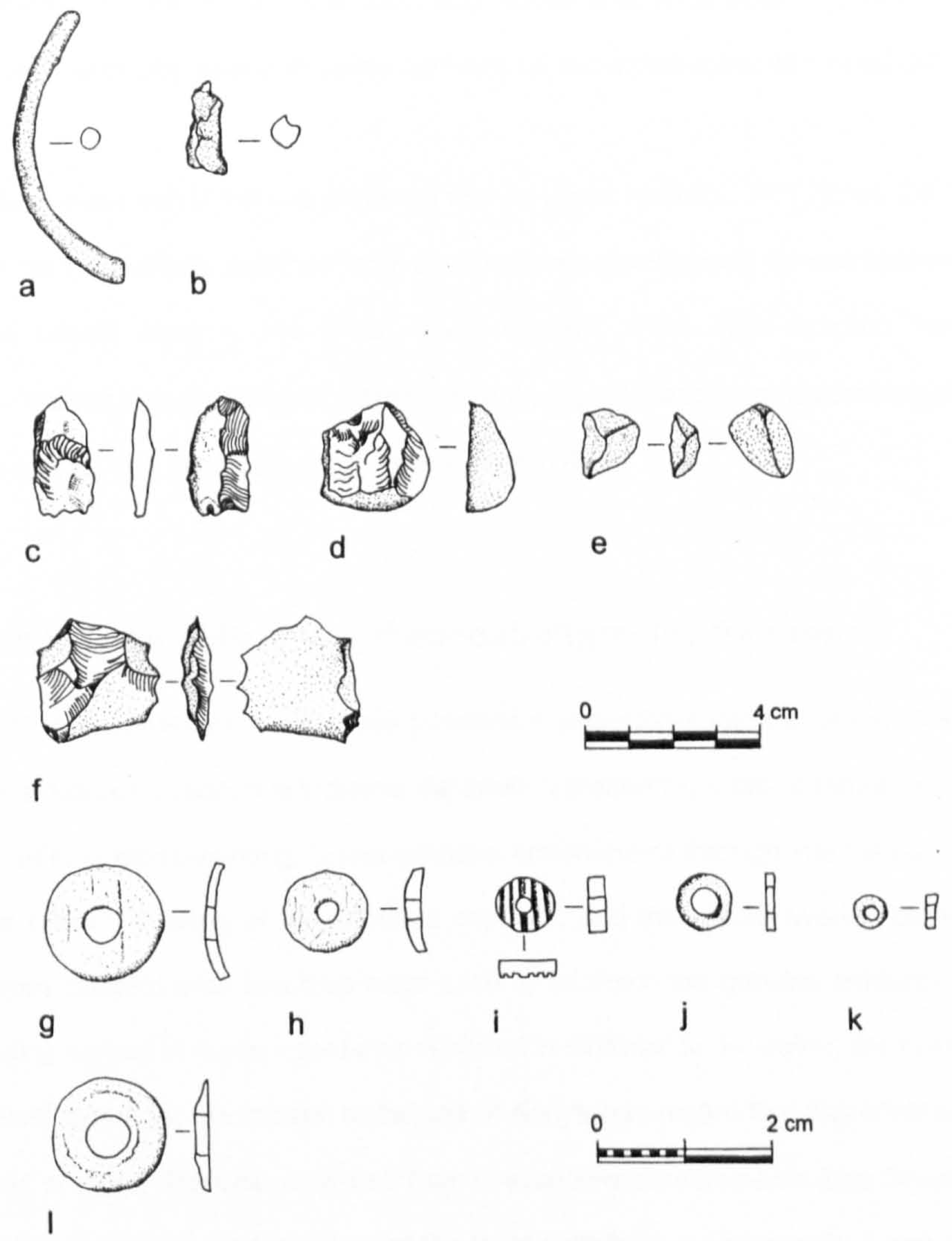


Figure 6.41 Copper, iron, lithic artefacts and shell beads from Mbuyuni 01

a copper bangle fragment, from trench 2 (01); **b** iron fragment, from trench 1 (07); **c-d** lithic, mid blue grey limestone, from trench 1 (17); **e** ochre fragment, from trench 1 (23); **f** lithic, orange brown Mazeras sandstone, from surface; **g** shell bead, medium disc, from trench 1 (02); **h** shell bead, small disc, from trench 1 (02); **i** shell bead, small disc with parallel surface grooves, from trench 1 (02); **j** shell bead, small disc, from surface; **k** glass bead, short drawn cylinder, light blue, from trench 1 (02); **l** iron bead, small disc, from surface.

6.6.5 Summary

The excavation of mound two showed no evidence of long-term occupation on its surface. Rather the mound itself was made up of relatively uniform horizons of redeposited occupation materials, which overlay a series of pre-mound occupation layers. On the basis of ceramic attributes, these pre-mound occupation horizons are seen to date to the later iron-working, farming period. Similarity in ceramics from the occupation layers identified in Trench Three would also suggest that these horizons relate to the main pre-mound settlement. Finally, the shallow soils, and absence of finds seen in Trench Two might well be a result of the removal of any such occupation surfaces for the construction of mound two.

The mound itself was seen to have a grave cut into its upper horizon. This burial, the lack of any evidence of occupation on the surface, and their local contemporary significance, for example mound one is recalled as being the central *moro* of the Kaya, would suggest some ritual function was attributed to their construction. Indeed, it is tempting to see this data as representing a transition from an originally domestic settlement to a later, and drastically reorganised, sacred Kaya.

6.7 Conclusion: establishing a chronostratigraphic framework

The five excavated settlement areas have provided a provisional sample of the stratified material culture sequence. As has been seen, this included materials representing a broad temporal span, ranging from the early activity of later stone-working, hunter-gatherer communities through into the later iron-working, farming period. The relative phasing of the stratified deposits, and the visible overlap between material cultures recovered from different sites has thus been used to reinforce the growing evidence for cultural continuity identified during survey of surface evidence reported in Chapter 5. However, the present lack of excavated settlement evidence from the coastal hinterland of Kenya has meant that this chronology is still dependant upon a series of dated deposits recovered from coastal littoral settlements (see Chapter 3). Whilst this can be evaluated through a revised seriation of the local pottery (see Chapter 7), it has also been of benefit to establish an independent series of control dates obtained from charcoal samples collected during this excavation. As was already reported during discussion of the excavated contexts, a total of five samples, one from each of the five excavated sites, were submitted for radiocarbon dating (see table 6.6).

Lab. no.	Site	Trench	Context	Radiocarbon Age BP	Calibrated date for Southern Hemisphere	Calibrated date for Northern Hemisphere
Pta-7957	Mgombani	3	16	1300 ± 50	AD 688 (774) 824; 827-857	AD 670 (695) 779
Pta-7978	Chombo	4	18	1180 ± 60	AD 867 (897) 986	AD 784 (879) 961
Pta-7955	Mteza	1	25	1190 ± 50	AD 869 (893) 978	AD 785 (876) 900; 931-944
Pta-7956	Mtsengo	1	57	580 ± 50	AD 1401 (1416) 1431	AD 1315-1349; 1387 (1404) 1418
Pta-7965	Mbuyuni	1	23	350 ± 50	AD 1507-1596; 1618 (1638) 1654	AD 1468 (1514, 1586, 1624) 1642

Note: calibrated dates are given at 1 sigma range with the most probable date indicated between brackets.
$\delta^{13}C$ (‰ PDB) = Pta-7957 (-27.2); Pta-7978 (-25.2); Pta-7955 (-27.6); Pta-7956 (-24.8); Pta-7965 (-24.1)

Table 6.6 List of radiocarbon dates

It is recognised that a dependency on single radiocarbon dates is by no means reliable. Until a multiple sequence is established from other carbon samples collected from the excavated trenches the vertical integrity of these dates can not be confirmed. Indeed, a dependency on individual and sometimes isolated radiocarbon dates has often been accepted without due recognition of the inherent taphonomic problems associated with such open sites in coastal East Africa. As was seen in the individual excavation descriptions, none of these samples were associated with any hearths or burnt structures, but were instead collected from loose spreads intermixed within occupation horizons, hence increasing the potential effects of bioturbation.

Furthermore, there is some uncertainty surrounding the natural variations in the atmospheric carbon in this region, and it's assimilation into local plants. Considering each site's location just south of the equator, it would seem that the predominant air body is part of the southern hemisphere circulation (Preston-Whyte, R. and P. Tyson, 1988: 190). To counter any uncertainty, calibrations for both the northern and southern hemispheres are shown, with those of the northern hemisphere somewhat earlier in date. However, as mixing of both northern and southern air is likely to have occurred, it is recommended that an average between the two calibrations be taken (Woodbourne, S. 1999 *pers. com.*).

Whilst recognising a need for caution, the five samples do seem to confirm the relative sequence already established from the preliminary assessment of observed materials. The earliest sample, that collected from the early to middle iron-working, farming period settlement at Mgombani is thus seen to fall between the 7th and mid 9th centuries AD. This was associated with both Kwale Ware and early TT/TIW ceramic variants and would, if accepted, appear to represent a relatively late transitional stage between the early and middle iron-working, farming periods. The samples from the middle iron-working, farming period settlements at Chombo and Mteza, both fall within a comfortable range of between the late 8th and late 10th centuries AD. However, the presence of Kwale Ware attributes in the ceramic assemblage from Chombo, and the greater preponderance of later TT/TIW pottery at Mteza would indicate that the earliest phase of occupation at Chombo should be seen to fall some time earlier, and the main phase of occupation at Mteza slightly later than is suggested by the reliance on single radiocarbon dates alone. Similarly, the sample from Mtsengo, which provided a date range of between the early 14th and early 15th centuries AD is perhaps later than would have been expected from a site, which on the basis of the material culture, would seem to have been founded from the middle iron-working, farming period. Finally, the date range obtained from the site of Mbuyuni, between the late 15th and mid 17th centuries would appear to be sound. Recovered from the initial occupation horizons, it provides some further confirmation that the construction of the mounds at Mbuyuni represented a late re-organisation of the original later iron-working, farming settlement.

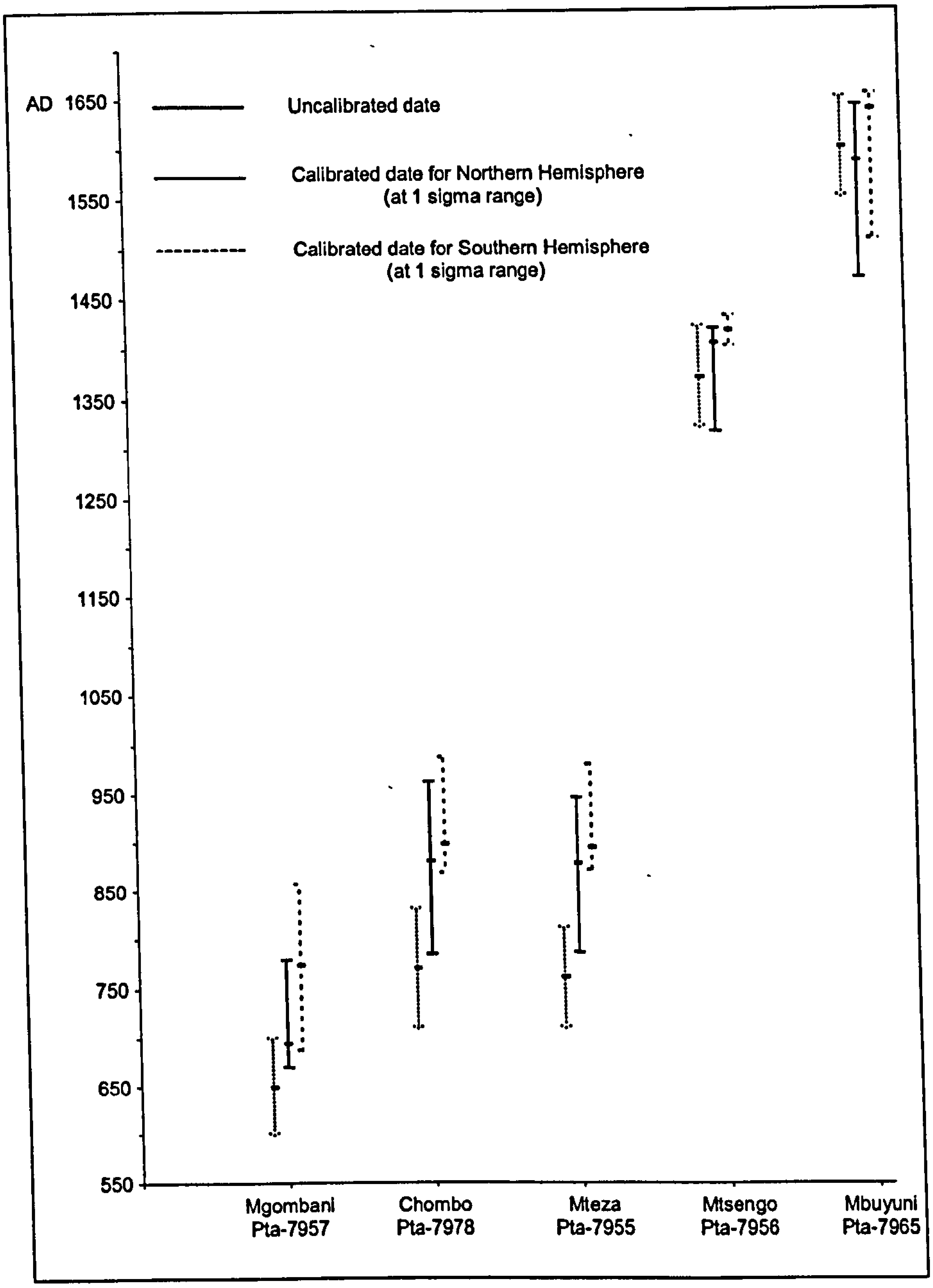


Figure 6.42 Chronological variance between radiocarbon dates from the five excavated sites

Figure 6.42 illustrates the temporal variance between the five samples. As can be seen, the sites of Mgombani, Chombo and Mteza would appear to cover the full emergence of middle iron-working, farming communities, with the sites of Mtsengo and Mbuyuni illustrating the development of later iron-working, farming communities. With this preliminary temporal sequence established we can now begin to explore the evidently continuous, but also changing material culture that has been observed.

Chapter 7 Pots and people: establishing a revised ceramic typology for the coastal hinterland of Kenya

'Simply stated, half a century of Iron Age research has produced a lot of information about pots, but relatively little about people' (Hall, M. 1987a: 16).

7.1 Introduction

This chapter looks at the assumptions underlying the interpretation of archaeological cultural units as commonly defined in the form of ceramic traditions, and the correlation of such assemblages with ethnic and linguistic groups. A critical review of the theoretical basis underlying these assumptions is made, and an alternative perspective, following that of Jones (1996, 1997) is summarised. This follows an epistemology well suited to our hermeneutic framework, which pursues recent developments in the definition of material culture and ethnicity in the archaeological literature.

The interpretation of material culture recovered from excavations in the coastal hinterland has wide reaching implications in our interpretation of contemporary notions of identity as embedded through a traditional past. However, the approach supported here seeks to distance itself from the traditional culture-historical correlation of archaeology with ethno-linguistic units. Instead, it is important to recognise that archaeological cultural units defined on the basis of a ceramic tradition alone do not constitute a direct association with ethnic and linguistic identity. Material culture, ethnicity and language are not bounded, monolithic and homogeneous entities; neither do they necessarily correspond hand-in-hand with each other (Jones, S. 1996, 1997). Although ceramics tend to be the most prevalent and analytical material recoverable from iron-working, farming sites in Eastern Africa, they are but one constituent within a wider multifaceted cultural identity. Such a theoretical standpoint has important repercussions for the existing debate on the ethnic and linguistic origins of the urban 'Swahili'. As has already been shown, previous attempts to associate the early TT/TIW pottery with Bantu speaking iron-working, farming communities (Chami, F. 1994) and/or Southern Cushitic speaking so-called Pastoral Neolithic communities (Abungu, G. 1994/5; Horton, M. 1996), continue to exemplify this problem.

These issues are brought together in an analysis of the ceramics excavated from the five sites outlined in Chapter 6. A multivariate analysis is made of the ceramic attributes. Attention focuses on the temporal variability evident in the decoration, shape, rim form and surface treatment of sherds. Correspondence Analysis is then used to seriate the decorative types. These results are discussed in the context of previous work on the typological development of TT/TIW. In conclusion it is argued that previous discussion has been based not only on models which are embedded in false assumptions, but have also used inconclusive and restricted data, poorly connected and prematurely placed within assumed ethnic and linguistic boundaries.

7.2 Interpreting material culture

Despite the enlightenment of 'New Archaeology' since the 1960s, and the resulting post-processualist reaction since the 1980s, so-called 'Iron Age' archaeology in East Africa has retained an essentially culture-historic epistemology. This sorry state is in part a result of the conscious and unconscious political agendas that have characterised much of the archaeological methodology, ensuring the continued interest in correlating archaeological cultures with ethnic and linguistic groups (Hall, M. 1984; see Chapter 1). Recent attempts to re-define the methodological perspective of contemporary 'Iron Age' research have as yet had only limited impact on published fieldwork (Sutton, J. 1994/5); ultimately the same primary analytical tools still remain.

Within the culture-historic framework of African 'Iron Age' archaeology, artificial boundaries were defined delimiting archaeological units as cultural entities, which could then be directly equated with equally artificially delineated ethnic and linguistic groups. The core concept was that of the archaeological culture, that is, an assemblage of shared material traits associated with sites in a particular region and at a particular time (Childe, V. 1956: 123). Whilst Childe's definition emphasised the importance of studying all aspects of the material record in the description of an archaeological culture (Jones, S. 1997: 18), the nature of fieldwork and the differential survival of material in the African context meant that the African 'Iron Age', and its 'package of cultural traits', was commonly identified on the basis of ceramics alone (Hall, M. 1987: 15-16; Huffman, T. 1980).

Despite an inadequate distribution of well-examined data sets (Phillipson, 1993: 191, fig. 7.22), the concept of the 'type site' allowed for an assumed representative norm between ceramics that shared the same or similar attributes. The definition of ceramic types and the classification of assemblages, which were seen to share common sets of types into traditions, allowed for broad spatial and temporal boundaries to be drawn. Where these boundaries were unclear, then the data was tidied-up to fit the neat, classificatory schema that were sought. Thus Soper's (1971b, 1971c) comparative analysis of the early 'Iron Age' pottery from East Africa, delimited the complexity of the so-called 'Iron Age Cultural Complex' into three homogeneous regional groupings for central, eastern and southern Africa on the strength of just 16 site assemblages of '*very uneven quality*' (Soper, R. 1971b: 15).

Whilst Soper's broad classification has with modification, been largely upheld (Phillipson, D. 1977; Collett, D. 1985; Huffman, T. 1989a, 1989b), debate amongst African archaeologists has tended to hinge upon the definition of more detailed and objective classificatory schemas (Huffman, T. 1980, and see the debate between Hall, M. 1983 and Huffman, T. 1983). Little attempt has been made in assessing the validity of using ceramics to define archaeological units, and the assumed correlation of archaeological units with ethnic and linguistic groups has formed the backbone of archaeological research in Africa (but see Hall, M. 1983; Collett, D. and P. Robertshaw, 1983b; Kiriama, H. 1993). Thus for Huffman:

> '*the basic premise that ceramic style can reflect group identity, has not been successfully challenged... as long as ceramic style is complex, it can represent the repetitive code of cultural symbols in the larger design field, and can be used to recognise groups of people in the archaeological record*' (Huffman, T. 1989b: 156).

Hence '*Iron Age archaeology is Bantu archaeology*' (Huffman, 1982: 148). Archaeology sought to explain the expansion of ethnic groups; the spread of a sub-Saharan Iron Age material culture was seen to be a product of Bantu migration. Where change in the material culture did occur, then explanation was sought through the diffusion of ideas between distinct population groups as a result of culture contact, or in the case of rapid change, through the replacement of the incumbent population through conquest and migration. The inevitable result has been the formation of '*bounded, monolithic and homogenous cultural entities*' (Jones, S. 1996), which, when overlain with ethnographic data and historical linguistics, were seen to represent the past distributions of ethnic and linguistic groups.

Whilst the inadequacies of the data did not, therefore, put-off early archaeologists from reconstructing the past, as the quantity of fieldwork increased so too did the number of observed ceramic attributes, and a corresponding growing awareness of the variability within and between defined ceramic traditions. This identification of heterogeneity in what were previously bounded, monolithic and homogenous entities led to a concern that the classification of material culture was little more than an etic construct, that is, an artificial creation of the archaeologist which bore no insight into the emic or local social reality (Melas, E. 1989). For example, Collett (1985) in exploring models for the spread of the 'Iron Age' in East and Southern Africa drew attention to the untenable link between material culture and ethnic and linguistic identity via an ethnohistorical parallel with the early 19th century migration of the Ngoni into Eastern Zambia:

> *'Thus the arrival of the Ngoni does not affect the local pottery styles and, in this case, ceramic style does not reflect the cultural affinities of the migrant group'* (Collett, D. 1985: 61).

> *'Huffman assumes that ceramic 'styles' reflect some form of ethnic group and if this is valid then different groups of people should be correlated with different styles and there should be clear stylistic discontinuities between groups. The present study shows that clear boundaries do not appear to exist between early Mwitu Tradition styles in Eastern Africa and this casts further doubt on the correlation between ceramic styles and groups of people'* (Collett, D. 1985: 172).

Similarly, working amongst the Agikuyu in Central Kenya, Kiriama (1993) noted that ceramic attributes were varible between different communites of Agikuyu, and attributes which charcterised the pottery styles from neighbouring Luo communities could also be copied by the Agikuyu potters. Ceramic classification thus:

> *'denies the makers or the users of such pots the ability to interact with their neighbours and also the ability to have individual variability within the group itself... A study of stylistic variability alone cannot enable us, therefore, to identify the makers of such* pots' (Kiriama, H. 1993: 493).

Most of the published ceramic analyses tend to be very similar in their methodological framework, that is they identify four main levels of analysis, which might be seen to follow a hierarchical structure. The smallest unit is that of the individual *attribute*, be it based on the fabric, size, shape or decoration. The next level is that of the *type*, which might be defined on the basis of the recurrent clustering of individual attributes together on an individual artefact. Above this is the *phase* and *facies*, which refers to specific groups of types, which are delimited from each other through variations in the occurrence of specific types over time or space respectively. Hence the broadest category, that of the *tradition*, is made up of several phases and/or facies, each of which shares a typological similarity within the overall ceramic tradition.

Within this framework, different archaeologists have used a variety of different attributes as the building blocks in defining their types, phases, facies and traditions, and it is here where the arbitrary and subjective nature of classification is most evident. Thus the degree of attention given is highly variable between fabric, size, shape and decoration, according to the research questions being asked. Furthermore, the analysis of decoration is itself broken down into those who prefer to study the form and placement of decorative attributes, the type of motif present and the decorative technique used (Abungu, G. 1989; Chami, F. 1994; Collett, D. 1985; Collett, D. and P. Robertshaw, 1983a; Horton, M. 1984, 1996; Huffman, T. 1980, 1989; Mutoro, H. 1987; Sinclair, P. 1983; Wandibba, S. 1982).

Comparison between different classificatory schemes illustrates the arbitrary and subjective nature of the archaeological cultures defined. Hence it is possible to derive a multiplicity of interpretative perspectives from the same data, depending on the research assumptions of the analyst. In the same way that there is no single solution in the analysis of material culture, there is equally no 'right' answer in the interpretation of results. In South Africa, Hall (1996: 154-156) draws attention to the competing histories created by Huffman (1978) and Maggs (1980). Both archaeologists use the same broad data population, yet Huffman interprets his classification of materials as evidence for successive Bantu migrations into the Kwa Zulu-Natal region, whereas Maggs argues for local evolution and continuity. Hence it is their opposing assumptions, discontinuity *vs.* continuity, which influence their approach to ceramic analysis and leads to a completely different set of results.

The continuing 'Swahili origins' debate between Horton (1990, 1996) and Chami (1994, 1998) is best seen in this light. Both are dependent on the locally produced TT/TIW ceramics and their respective typologies. Whereas Horton collected his ceramic sample from the site of Shanga, located in the Lamu Archipelago of northern Kenya, Chami collected his from a variety of locations along the central coast and hinterland of Tanzania. Whereas Horton assumed a Cushitic pastoralist origin for the early trading settlements, Chami posited a Bantu, agricultural origin. Whereas Horton argued for discontinuity between the earlier Bantu agricultural communities and the later Bantu speaking Swahili, Chami argued for continuity. And whereas Horton used a monothetic system which assumed his assemblage was composed of a singular and evolving TT/TIW ceramic tradition, Chami used a multi-variable approach which compared the pottery of early Bantu speaking agriculturalists with that of the later TT/TIW using Swahili. Yet both Horton and Chami also assumed that TT/TIW, as part of the early Swahili material culture, is indirectly attributable to ethnic identity, and both defined their resulting typologies on the assumption that archaeological cultures are bounded, monolithic and homogeneous entities.

7.3 Modelling ethnicity and culture

The assumption of bounded, monolithic and homogenous archaeological units was dependent upon the assumption that human culture and ethnicity also constitute discrete entities (Moore, J. 1994: 925). Yet it is now clear that such a reductionist perception of the relationship between material culture, language and ethnic identity is '*a modern classificatory invention*' (Jones, S. 1997: 66). Models of culture and ethnicity evolved from social anthropology. The traditional assumption that ethnic identity could be defined on the basis of observered distributions of cultural traits was increasingly challenged from the 1950s (Leach, E. 1954; Barth, F. 1969). Whilst '*ethnic categories take cultural difference into account, we can assume no one-to-one relationship between ethnic units and cultural similarities and differences*' (Barth, F. 1969: 14; cited in Jones, S. 1997). Recognition of the need for an emic classification of ethnic identity; the need to understand ethnicity through an individual's own perspective of his/her identity and that of others, led to a questioning of how such an identity might be formed. Two competing schools of thought, subsumed under the headings of primordialism and instrumentalism, dominate these early debates.

Primordialist perceptions emphasised the natural and ascriptive nature of ethnic identity accquired at birth, which underlay other forms of social and economic ties (Shils, E. 1957; Geertz, C, 1963; Isaacs, H, 1974). Hence cultural traits such as language, religion, historical identity, social values and even the individual's name are all inherited through ties of kin, which exert a strong psychological pull towards group identity through the 'we'/'them' dichotomy (Jones, S. 1997: 65-72). Instrumentalist approaches on the other hand, sought to emphasise the subjective nature of identity further. Ethnicity was explored as a tool for the '*mediation of social relations and the negotiation of access to resources, primarily economic and political resources*' (Jones, S. 1997: 72). Hence ethnic identity is manipulated to serve the contemporary needs of a collective interest; as the context changes so too does the relevant identity (Barth, F. 1969; Cohen, A. 1974). In this way, instrumentalist perspectives drew attention to the fluid and self-defining nature of ethnic identity, the definition of ethnic boundaries, and the influence of inter-ethnic relations; elements which were left unaccounted for in the primordialist models (Jones, S 1996: 67; 1996b: 72-79).

Primordialist and instrumentalist explanations of ethnic identity are often portrayed as being diametrically opposed (Bentley, G. 1987; Jones, S. 1997). Primordialism suggests that ethnic identity is involuntary, deep-seated and static, whilst instrumentalism reduces ethnic identity to economic and political relationships which assume human behaviour is rational and self determined. Attempts to transcend this primordialist-instrumentalist dichotomy have tended to integrate both approaches together, recognising a primordial base from which ethnicity is then articulated through instrumental action (Keyes, C. 1971; McKay, J. 1982; Smith, A. 1981; Stack, J. 1986; cited in Jones, S. 1997: 79-83). However, neither primordialist nor instrumentalist perspectives provide a precise definition of the relationship between ethnic identity and associated culture (Jones, 1996: 67). To escape this problem, Jones (1996, 1997), following Bentley (1987), draws upon Bourdieu's (1977) concept of the *habitus*. The *habitus* comprises a system of '*structured, structuring and durable dispositions produced historically, through which cultural practise was conditioned*' (Last, J. 1995: 149).

> *'The structures constitutive of a particular type of environment (e.g. the material conditions of existence characteristic of a class condition) produce habitus, systems of durable, transposable dispositions... The habitus is the product of the work of inculcation and appropriation necessary in order for those products of collective history, the objective structures (e.g. language, economy, etc.) to succeed in reproducing themselves' Bourdieu, P. 1977: 72, 85; cited in Bentley, G. 1987: 28).*

In other words, the actions of individuals are grounded in the shared internal experience of their *habitus*, the existing systems of meaning, which shape, and is itself shaped by the habitual practices and experiences of its members. The *habitus* itself represents multiple levels of overlapping dispositions, from that of the individual to that of the shared set of communal experiences to which '*sensations of ethnic affinity are founded*' (Bentley, G. 1987: 32). In this sense, the *habitus* does not represent a form of '*communal consensus*' (Jones, S. 1997: 92); it is possible for the members of an ethnic group to share different experiences and divergent interests. Whilst the *habitus* provides the basis for the recognition of shared identity, the underlying structures may also produce a wide variety of surface cultural expressions (Bentley, G. 1991; cited Jones, S. 1997: 93). Hence, '*the notion of the habitus enables a separation between surface cultural expressions and deep structural dispositions, and as a result he* [Bentley] *is able to accommodate disjunctions between ethnic boundaries and the distribution of objective cultural traits*' (Jones, S. 1997: 92).

Jones (1997: 92-100) goes on to argue that where there is a disjuncture between *habitus* and culture, there will also be a disjuncture between *habitus* and ethnic identity. Ethnic identity is the product of '*a conciousness of difference*' (Jones, S. 1997: 94); groups define themselves not through their own internal similarity, but through their perception of the difference of others.

> '*The objectification of cultural difference in the construction of ethnicity involves the opposition of different cultural traditions. The particular form such oppositions take is a product of the intersection of the habitus of the people concerned with the conditions making up a particular context of interaction*' (Jones, S. 1997: 96).

Hence ethnicity is a product of the on-going interactions between different cultural traditions and the embodiment of those differences within shared dispositions of the *habitus*. In this sense, the correspondence between ethnic identity, cultural practice and the *habitus* will fluctuate over time according to the variety and complexity of the different social domains through which the agents are linked. This escapes falling into the reductionist trap of perpetuating ethnicity and culture within the bounded, monolithic and homogeneous mould of culture-history.

> '*Ethnicity is a multidimensional phenomenom constituted in different social domains. Representations of ethnicity involve the dialectical opposition of situationally relevant cultural practises and historical experience associated with different cultural traditions. Consequently there is rarely a one-to-one relationship between representations of ethnicity and the entire range of cultural practises and social conditions associated with a particular group. From a 'bird's eye view' the resulting pattern will be one of overlapping ethnic boundaries constituted by representations of cultural difference, which are at once transient, but also subject to reproduction and transformation in the ongoing processes of social life*' (Jones, S. 1997: 100).

7.4 Archaeological cultures

How then are we to place this revised view of ethnicity and culture within the methodological framework that exists in African 'Iron Age' archaeology? If it is now clear that a direct correlation between ethnicity, culture and the *habitus* is no longer a valid presupposition, then neither can we assume the same relationship for the observed material patterns collected and classified by archaeologists. Recognition of the inconsistency between the spatial variation of observed material culture patterns and past populations, and a criticism of the artificial nature of archaeological classification has led to a general feeling that archaeological cultures '*are summary descriptions of patterns of spatial variation, not merely useless for analytical purposes, but positively misleading if taken as the basis of an approach to prehistory*' (Shennan, S. 1989: 11). Within this long and continuing debate, three key themes are commonly emphasised (for example, see Chapman, J. and P. Dolukhanov (eds.), 1989; Hodder, I. 1978, 1982; Jones, S. 1997; Shanks, M. and C. Tilley, 1987; Shennan, S. 1989):

Firstly, archaeological cultures are not directly equivalent to ethnicity. They are subjective creations identified by the archaeologist to help explain variations in the spatial and temporal patterning of archaeological materials. Often such discussion hinges on the nature of archaeological types: that classification tends to be monothetic, and where data which did not fit archaeologists' definitions of a diagnostic type would be discarded as not significant (Adams, W. and E. Adams, 1991).

Secondly, the constituent elements of archaeological cultures are no longer seen to define discrete, homogeneous units, but instead, are seen to form overlapping patterns, with often unclear or gradual differentiation within and between different cultural groups. Clarke's (1968) definition of polythetic social systems viewed culture in terms of interlocking patterns of distinct analytical entities. The traits of a material culture therefore constitute only one amongst many of the subsystems within a society and therefore bare no direct relationship with ethnicity in itself. Hence, it is necessary to take '*the more radical step of recognizing that this untidiness is, in fact, the essence of the situation, arising from the fact that there are no such entities as 'cultures', simply the contingent interrelations of different distributions produced by different factors*' (Shennan, S. 1989: 13).

Finally, spatial variation in archaeological materials is the product of a variety of different factors; it is not just the passive reflection of physical and/or social distance between different cultural groups. '*Culture is not necessarily shared; it is participated in. And it is participated in differentially*' (Binford, L. 1965: 205). Hence it is the responsibility of the archaeologists to analyse the structure of material assemblages, to understand their meaning within the different levels of the social system.

7.5 Function and style

Two forms of meaning, the structured system of functional interrelationships, and the structured content of ideas and symbols are recognised to exist in material assemblages (Hodder, I. 1991: 124). Of these functional variation received greatest attention during the 60s and 70s. Functional variation in material assemblages was seen as a product of the different responses to the different underlying structures of the social system. Variation in the functional attributes of pottery, for example, size, shape and form, were related to cooking techniques, the size of the domestic group, the rank of the individual using the pottery, whether the pottery was made by a specialist and so on (Shennan, S. 1989: 13). Style, which included individual decorative motifs and their structural pattern, on the other hand, was until the late 70s seen as an essentially passive product of enculturation and therefore a direct representation of ethnic identity (Binford, L. 1965). Sackett (1977, 1982, 1985, 1986, 1991) questioned this dichotomy between function and style when he outlined his notion of 'isochrestic variation', which saw both function and style as embedded in one another. However, it was from the early 1980s that style was fully explored as an active form of social communication (Conkey, M. and C. Hastorf (eds.) 1991; Hodder, I. 1982, 1989, 1993; Shanks M. and C. Tilley, 1987; Weissner, P. 1983, 1985, 1989).

> '*Stylistic variation is not regarded as merely a passive reflection of enculturation within ethnically bounded contexts; rather it is actively produced, maintained and manipulated in the process of communication, and the mediation of social relationships*' (Jones, S. 1997: 115).

Material culture is seen as an active part of the social system, both being structured by, and structuring cultural practises as each successive representation of the conscious and unconscious meanings establish new frames of reference. Cultural traits can no longer be perceived as a passive representation of the degree of similarity/difference between ethnic groups. Neither then can the material representation of those cultural traits be directly equated with ethnic identity. Whilst material culture might be used to signify ethnic identity between groups, Jones' (1997) suggests that the representation of such meanings in elements of the material culture is not arbitrary, but dependent upon a variety of factors linked to the structured dispositions of the *habitus*. Therefore the relationship between ethnicity and material culture is by no means a fixed or intrinsic one. Rather, it will vary according to the different social contexts and different forms and scales of social interaction.

> '*Material culture is actively structured and structuring throughout its social life, and consequently its meaning is not fixed but constantly subject to reproduction and transformation... On this basis it cannot be assumed a priori that similarity in material culture reflects the presence of a particular group of people in the past, an index of social interaction, or a shared normative framework*' (Jones, S. 1997: 126).

Such assumptions must first be evaluated within a contextual framework before they can be fully accepted.

7.6 Analysis of ceramics from the coastal hinterland region of Kenya

Jones' (1997) comparative theory of ethnicity has important implications for how we approach the analysis and interpretation of the excavated coastal hinterland ceramics. Whilst Jones (1996, 1997) fails to offer any methodological alternatives to how material culture might be analysed at the practical level, for example we are still left with the typological schemas that have, and still continue to characterise culture-historical archaeologies, her critique does allow us, in using the existing analytical methods available, to be aware of their inherent problems, limitations, and often unstated assumptions. Firstly, we can no longer, assume that similarity or difference between the ceramic attributes from different assemblages immediately justifies their pigeon holing into one-or-another bounded, monolithic and homogeneous ceramic tradition. Rather, we must allow the analysis of ceramic data to reflect the full variation within and between assemblages; in effect to explore its potential heterogeneity. Secondly, we can no longer directly equate the different ceramic traditions identified to different social, ethnic and linguistic populations as previous archaeologists have consciously or unconsciously done. Our analysis should recognise that material culture is actively influenced by, and influences the dynamic processes of social interaction, both between and within groups. Finally, and perhaps most importantly, we must now be aware that ceramics constitute only one aspect within a multifaceted material culture; they can not be used in isolation to justify a grand culture-historic framework.

A multivariate approach has been used in the analysis of the ceramic assemblages recovered from the excavation of the five settlement areas outlined in Chapter 6. This closely follows the methodology outlined by Sinclair (1983; 1990), and is an extension on the recording format developed by Nordström (1972, 1973) and Hulthén (1977). Whilst this method originally utilised a hierarchical view of ceramic classification (i.e. attribute, type, phase, facies and tradition), it is also seen to have a far greater potential for the assessment of internal variability within an assemblage, than alternative approaches. This is achieved through recording in a format that differentiates not only between individual sherds, but also between the separate components that constitute each sherd. Thus, rather than taking each sherd as a complete 'whole' we can instead explore variation between the individual 'parts' of each sherd. In other words, rather than 'lumping' all attributes together into a single diagnostic type, as was previously the case, we can instead map variations between individual attributes. All diagnostic sherds analysed were therefore recorded using the data format below (see table 7.1).

Col. 1	Sherd number	Col. 18	Decoration motif on neck
Col. 2	Site code	Col. 19	Format of decoration on shoulder
Col. 3	Trench number	Col. 20	Decoration motif on shoulder
Col. 4	Context	Col. 21	Format of decoration on body
Col. 5	Fabric code	Col. 22	Decoration motif on body
Col. 6	Rim form	Col. 23	Format of decoration on base
Col. 7	Neck form	Col. 24	Decoration motif on base
Col. 8	Shoulder form	Col. 25	Surface treatment internal
Col. 9	Body form	Col. 26	Surface treatment external
Col. 10	Base form	Col. 27	Rim diameter (mm)
Col. 11	Format of internal decoration	Col. 28	Rim percentage (%)
Col. 12	Internal decoration motif	Col. 29	Sherd thickness (mm)
Col. 13	Format decoration on top of rim	Col. 30	Sherd width (mm)
Col. 14	Decoration motif on top of rim	Col. 31	Sherd weight (gms)
Col. 15	Format of decoration on rim	Col. 32	Structural shape category
Col. 16	Decoration motif on rim	Col. 33	Notes
Col. 17	Format of decoration on neck		

Table 7.1 Individual sherd data format (based on Sinclair, P. 1983)

Individual sherds are recorded in terms of their locational position (site, trench and stratigraphic context), their structural shape and form (rim, neck shoulder, body and base), decoration (its format, motifs and positioning), their surface treatment, and fabric. This data was then transferred to a spread sheet using the Microsoft Excel program via a portable Personal Computer. Such a format provides excellent import/export facilities between the commercially available SPSS and BASP statistics packages used in this analysis.

The analysis was carried out in the following sequence. As each context was analysed, the respective bag of sherds was spread over a table and crudely sorted into fabric groups identified through the use of a hand lens. Each sherd was then marked with an identification number to enable independent checking of the record if necessary. Sherds within each fabric group were then analysed individually using the data format above.

Once all sherds from a context had been recorded, samples from each fabric group were retained for comparison with the next context, and so on, until all the ceramics from each site had been placed within the appropriate fabric group and documented. A list of the 79 local fabric groups identified is given in Appendix C. All local fabrics are seen to be unique to their individual site assemblages, confirming the generally accepted opinion that production and use of ceramics was in the past based on a local village level (Chami, F. 1994: 89).

7.6.1 Diagnostic and non-diagnostic sherds

A total of 49,756 sherds were collected from the stratified contexts of each trench from the five excavated sites. As each context was excavated, on-site sorting of the ceramics was undertaken to determine diagnostic and non-diagnostic sherds. Diagnostic sherds were defined on the basis of the presence of a rim, base, type of surface treatment and/or the presence of decorative motifs. Non-diagnostic sherds were defined on the basis of undecorated neck, shoulder and/or body sherds with no surface treatment. All non-diagnostic sherds were then counted and weighed by context, before being reburied in the trench from which they had been recovered at the close of each excavation. Of the 49,756 sherds collected, a total of 11,387 (22.9%) were defined as diagnostic (see table 7.2). These are stored in Fort Jesus Museum, Mombasa for further analysis, as and when required.

Site	Total sherds	No. of diagnostic sherds	% diagnostic sherds	No. diagnostic analysed	% diagnostic analysed
Mgombani	8240	2413	29.3	600	24.9
Chombo	8215	2680	32.6	1063	39.7
Mteza	3880	1181	30.4	476	40.3
Mtsengo	21648	4013	18.5	1117	27.8
Mbuyuni	7773	1100	14.2	732	66.6
Totals	49756	11387	22.9	3988	35.0

Table 7.2 Raw sherd counts and percentages of diagnostic sherds.

A shortage of time meant that the detailed recording of ceramics had to be restricted to just one trench from each of the five excavated sites. This constituted a total of 3,988 diagnostic sherds, that is, 35% of the total available diagnostic sample (see table 7.2 above and figure 7.1 below).

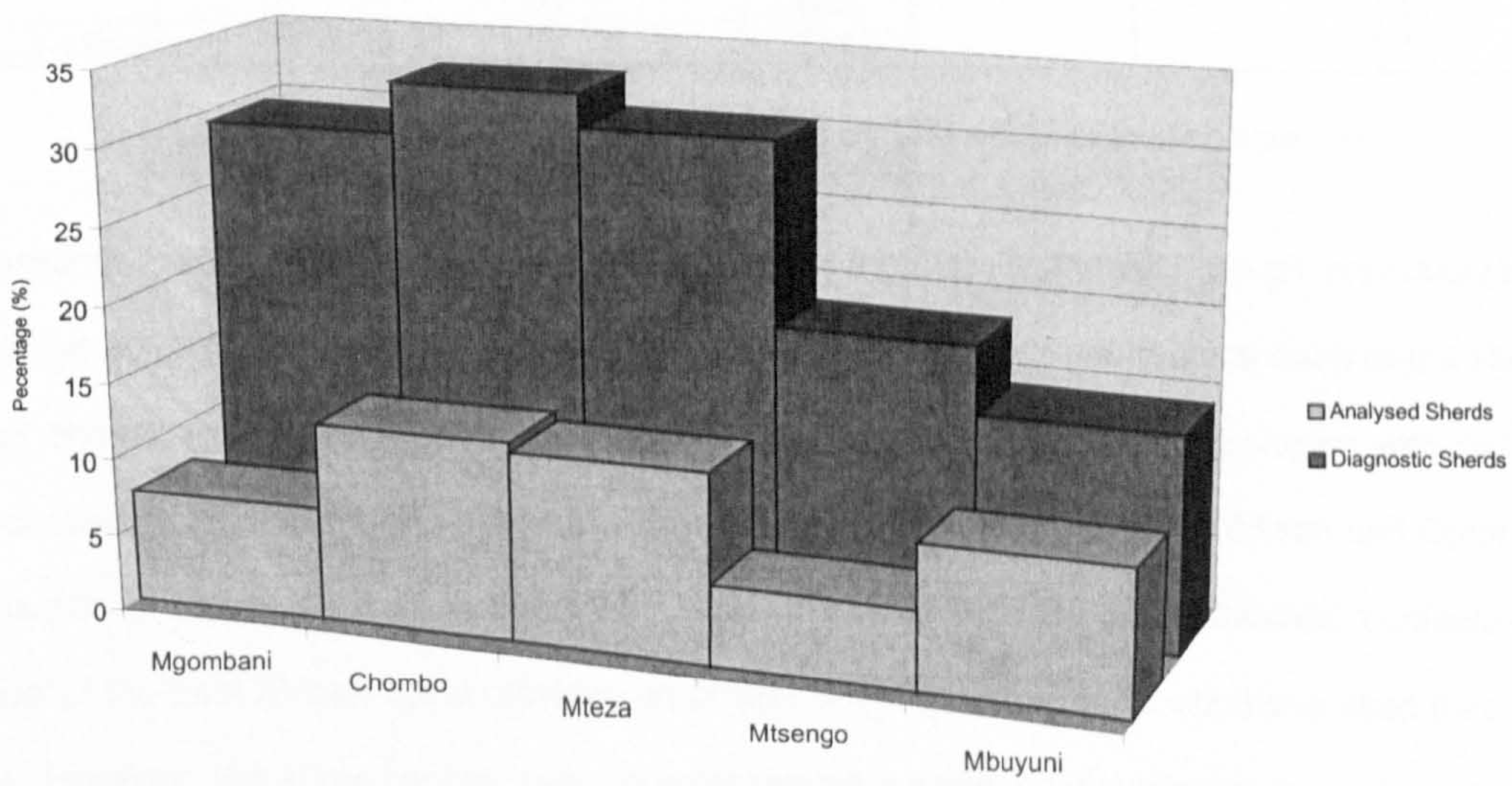


Figure 7.1 Percentage distribution of diagnostic sherds (rims, bases and all decorated sherds), and total analysed diagnostic sherds by site.

The choice of which trench from each site was to be analysed is based upon an evaluation of both the quality of stratigraphy, the availability of carbon samples for absolute dating evidence, and the relative quantity of material evidence available. Whilst this has reduced the total number of sherds to a sample size manageable within the restraints of this study, it does mean that the results presented here emphasise the temporal (vertical) rather than spatial (horizontal) patterns of intra and inter site variability.

7.6.2 Stratigraphic phases

Within each trench, the excavated contexts were sorted into stratigraphic phases and allocated a consecutive phase number (see table 7.3 below). This reduced the total 48 excavated contexts into 28 phases. As a result, those contexts with very few sherds, for example the fills of post-holes, pits and restricted layers which were seen to have little statistical significance, were amalgamated into more meaningful statistical units, relative to their stratigraphic position.

Phase	Site	Trench No.	Contexts	Phase	Site	Trench No.	Contexts
C1	Mgombani	3	29, 35	C15	Mtsengo	1	64, 58
C2			28, 20	C16			57
C3			16, 14	C17			46
C4			06	C18			29
C5			05, 03	C19			37, 03
C6	Chombo	4	20, 18	C20			39, 12, 8, 6
C7			14	C21			02
C8			13	C22			01
C9			11	C23	Mbuyuni	1	26,24, 23, 22
C10	Mteza	1	25, 09	C24			17, 19
C11			23, 19, 08	C25			14, 11
C12			02	C26			02
C13			01	C27			07
C14	Mtsengo	1	67, 68	C28			01

Table 7.3 List of stratigraphic phases by site and excavated context.

Each assemblage was seen to represent one or more of the main typological groups previously identified in the coast and hinterland regions of East Africa. Hence, it was possible to place each of the sites within a broad chronological order, based upon those existing published ceramic typologies with radiocarbon dated deposits[1]. Horton's (1996) analysis of ceramics excavated from Shanga, Wilson and Omar's (1997) periodisation of ceramics excavated from Pate, and Chami's (1998) recently published *'contextual pottery seriation'* of the East African coast provides an outline of the key diagnostic attributes used (see table 7.6 below). However, this should not be seen as representing a single continuum between sites. As we have

[1] Acknowledgement is also given to Dr. Felix Chami for his on-site discussion and help in outlining his views on and dating of the typological development of TT/TIW.

seen in Chapter 6, the range of dates obtained from radiocarbon analysis has shown that the final stratigraphic phase in Mgombani (phase 6) does not necessarily pre-date the earliest phase in Chombo (phase 7), the earliest phase identified at Mteza (phase 10) does not necessarily post-date the latest phase in Chombo (phase 9), and so on. The validity of this chronological ordering between sites is explored more fully through the application of Correspondence Analysis below (see section 7.7).

Whilst the ceramics from each excavated site represent separate assemblages, the following analysis, differentiates between individual phases, but does not treat each assemblage in isolation. Rather variation is explored both within and between assemblages as an indicator of temporal change. The following analysis has been sub-divided into imported and local ceramic wares. The very small quantity of imported sherds warrants their treatment together. In contrast, the analysis of local ceramics has focused on four main diagnostic attributes: decoration, shape, rim form and surface treatment respectively.

7.6.3 Imported Pottery

Only 8 imported sherds were recognised from the diagnostic sample analysed, constituting less than 0.03% of the total assemblage sample. A list of the imported Wares present is given below (see table 7.4).[2] For a more detailed treatment of each wares characteristics and provenance, refer to Chittick (1974, 1984), Horton (1996), Kirkman (1954, 1974), Wilding (1977), and Wilson and Omar (1997). The marked absence of imported sherds has been noted on hinterland sites elsewhere (Abungu, G. 1989; Chami, F. 1994; Schmidt et. al. 1992). Whilst Horton (1996: 243) draws attention to the problems inherent in defining some of the coarser imported ceramics, it is clear that the absence of visible imports such as the high quality glazed wares does require further explanation.

[2] Identification of imported wares was undertaken with the kind help of Mr. Mohamed Mchulla, National Museums of Kenya.

Imported Ware	Approximate Date	Site	Phase	Frequency
Sasanian blue-green glazed ware	c.8th C. AD.	Mgombani	5	1
Chinese Yue Stoneware	c. 9th-12th C. AD.	Mteza	13	1
Hatched Sgraffiato	c. 11th C. AD.	Mteza	13	1
Chinese white porcelain	c. 11th C. AD. onwards	Mbuyuni	25	2
Near Eastern Gudulia (water jars)	c. 11th-14th C. AD.	Mbuyuni	26	1
Islamic greenish blue monochrome	c. mid 14th-17th C. AD.	Mbuyuni	27	1
Islamic green monochrome	c. mid 14th-17th C. AD.	Mbuyuni	27	1

Table 7.4 List of Imported Wares by Site and Phase. Approximate dates are derived from Horton (1996) and Wilson and Omar (1997).

Caution should be taken in the use of imported wares as a tool for the absolute dating of deposits without supporting evidence from radiocarbon or some other dating technique, and especially where there occurrence is insufficiently common (Chami, F. 1994: 90; Horton, M. 1996: 14). However, the distribution and approximate dating of the very small sample of isolated sherds identified here does compare well with the date ranges obtained from radiocarbon analysis. Both thus help to reinforce the validity of the relative ordering of phases and sites outlined above from the c. 8th century AD Sasanian sherd identified in the later phase 5 at Mgombani to the 14th-17th century Islamic Monochrome sherds identified in the later phase of Mbuyuni.

7.6.4 Local Decoration

The decoration observed on each sherd has been broken down into individual decorative motifs. These form the building blocks for the overall decorative pattern, which in essence, is the format of the combination of decorative motifs on an individual vessel. However, as is common in East African conditions, the ceramic assemblages from each site have proven to be fragmentary, with the single exception of one complete, but unfortunately undecorated vessel from Mbuyuni. An overall 'index of fragmentation' was made by summing the percentage number of degrees present from each rim sherd identified, and then dividing by the total number of rims measured (Sinclair, P. 1983: 36). This gave a low mean average of 4.1%. In other words, on average only 4.1% of the overall rim diameter was present in any surviving rim sherd, reflecting a very high degree of fragmentation within the assemblage. This average varies only slightly, +/- 0.3% between the five excavated sites. It is therefore impossible to reconstruct the complete decorative pattern or accurately assess the variations in design structure of complete vessels.

Whilst it has been shown that formal analysis of whole vessels rather than vessel fragments are more accurate because they allow the assessment of complete motif combinations (Huffman, T. 1980), variability in decoration motifs and format can still be assessed by sorting the assemblage into structural categories which can then be compared (see section 7.6.5 and Sinclair, P. 1983). This is further justified through the recording format developed by Nordstöm (1972, 1973) and Hulthén (1977) which has been outlined in section 7.6. Hence by recording the presence of individual vessel parts (rim, neck, shoulder, body, base), and by isolating the individual motifs and their format, we are still able to compare proportionally the occurrence of individual, and combinations of the decorative attributes present on any single sherd (see figures 7.3-7.6).

A total of 4,427 local decorated sherds and 23,232 undecorated local sherds were excavated from each analysed trench from the five excavated sites. There appears to be a general decline in the proportion of local decorated sherds as we move between sites and phases (see figure 7.2).

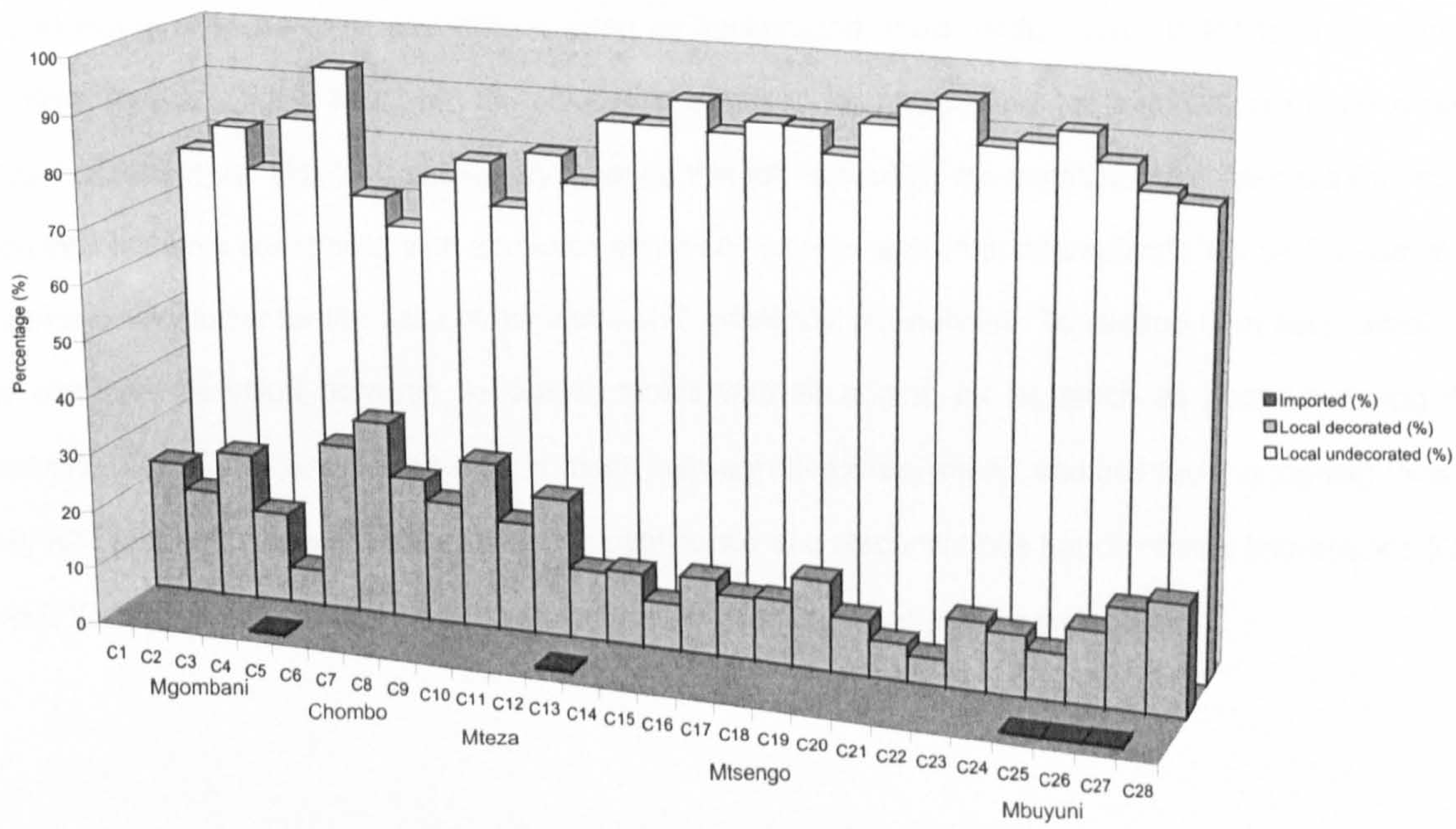


Figure 7.2 Percentage distribution of local decorated, local undecorated and imported wares by phase

Hence the Kwale Ware-TT/TIW site of Mgombani (18.3%), and the TT/TIW sites of Chombo (26.7%) and Mteza (20.7%) contrast notably with the later sites of Mtsengo (12.4%) and Mbuyuni (11.0%). This supports the similar findings by Chami (1994: 71-72) that the ratio between non-decorated and decorated sherds is in part an indicator of chronology, the earlier the site, the greater the proportion of decorated sherds. Variation in the proportions of non-decorated sherds lends no support to Chami's (1998) identification of a distinct Plain Ware (PW) ceramic group, confirming his assertion that in contrast to the coast south of Tanga '*the northern coast did not adopt the PW tradition*' (Chami, F. 1998: 212).

Amongst the local decorated sherds analysed, a total of 113 individual decorative motifs were recognised from the five assemblages, occurring in single, double or multiple formats of horizontal, vertical or oblique patterning. These can be broadly subdivided into flutes and/or bevels, comb stamped, grooved and/or dragged, incised, punctated and stabbed motifs reflecting the variance in techniques of application through each assemblage. Within these sub-groups, individual decorative attributes were allocated codes as and when they were observed (see table 7.5 below).

The analysis sought to homogenise variations between similar but different decorative motifs as little as possible. As already stated those decoration classes previously defined for ceramics from the coastal littoral sites often hide much internal variation. For example, Chami's (1994: 74) all-encompassing definition of 'punctates', and Horton's (1996: 253) homogenous 'miscellaneous linear decoration' do not reflect the full variation that is inherent within each category.

In part this is because most variability is seen as background noise, undiagnostic in terms of typological identity. Indeed, Chami has even been recently criticised for recognising too much of this unnecessary 'noise' (Haaland, R. 1998). However, by ignoring this full variability, the resulting typologies are little more than interpretative constructs, with attributes either completely ignored or alternatively 'lumped' together as diagnostically similar for the sake of neatness and 'efficiency' of analysis. To escape from such criticisms, the observed variation between decorative motifs was accounted for as much as possible during this analysis. For example, differentiation is made between disjoined, joined and interlocking zig-zag incision (A9, A23 and A11 respectively), or between continuous and discontinuous bands of stab impressions (C16 and C12 respectively), which would have otherwise been commonly grouped together.

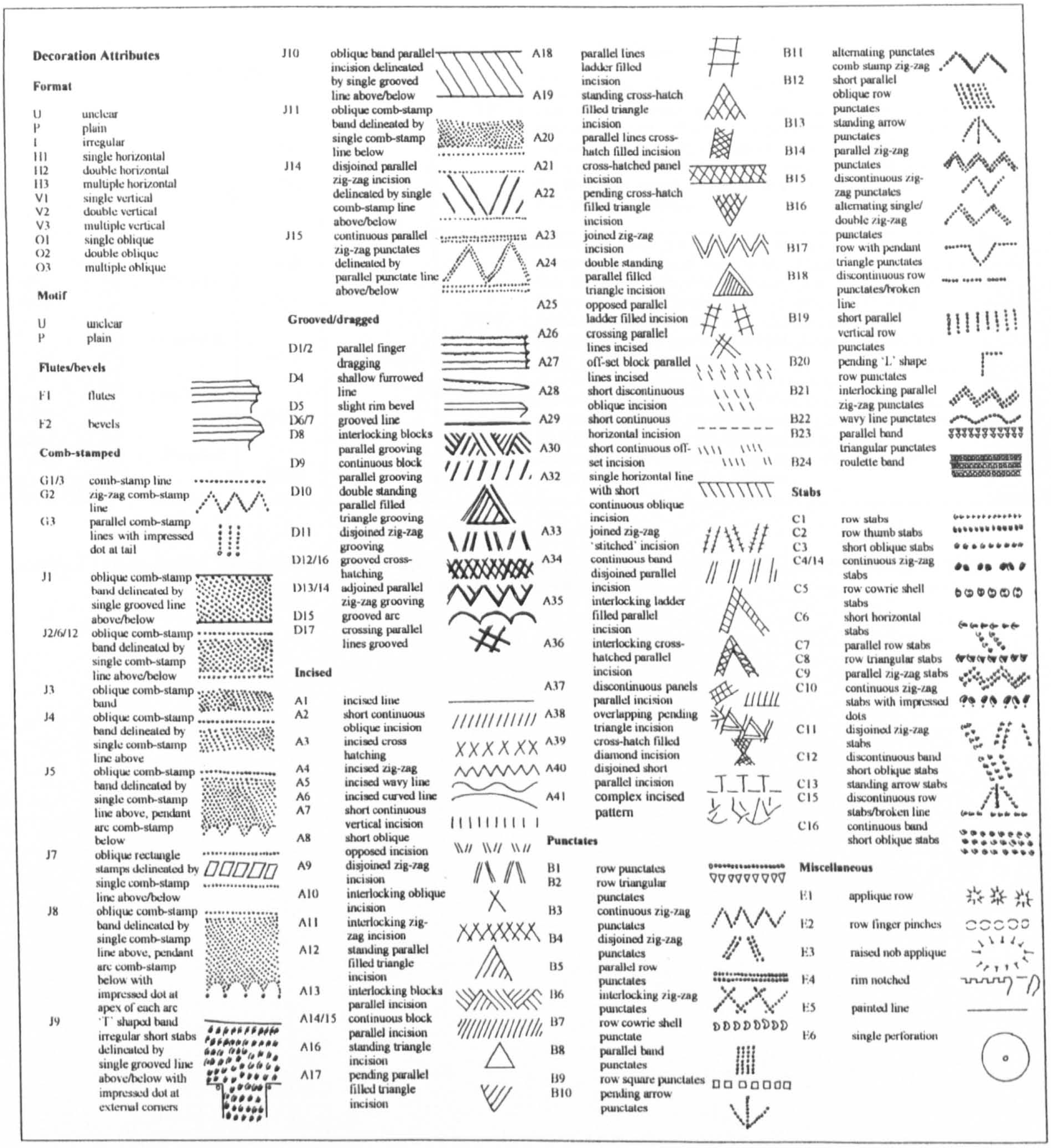


Table 7.5 List of local decoration attributes

The placement and format of the individual decorative motifs were examined on a sherd by sherd basis. These were then sorted into a total of 266 decoration 'types', based on each sherd's overall decorative structure, that is the total combination of decoration motifs present on each individual sherd. To evaluate the existing ceramic typologies, each decoration 'type' was sorted, in accordance with each ceramic group's 'key decorative attributes', into a crude chronological order spanning the early, middle and later iron-working, farming periods respectively (see table 7.5 below). Each 'type' was then allocated a consecutive decoration 'type' number, from t1 to t280 (see figures 7.3-7.6 below).

Period	Ceramic Phases (after Horton 1996)		Ceramic Groups (after Chami 1998)		Summary of key decorative attributes	Type No.
Early iron-working, farming communities	Kwale	AD. 200 400	Limbo Kwale Mwangia	AD. 100 200 550	Thickened, bevelled and fluted rims, bands of comb-stamping, punctates, vertical, oblique and zig-zag incised, grooved or stamped lines, cross-hatching and false relief chevrons are all cited. However, individual motifs are seen to be variable between the different defined groups; the Mwangia phase sharing many motifs recognised in TT/TIW assemblages	t1 to t65
Middle iron-working, farming communities	TT Phase A TT Phase B	750 900 1100	TIW Plain Ware	600 1000	Incised triangles are prominent, either standing or pending, with oblique, horizontal, vertical or cross-hatched fills, cross-hatched panels, single, parallel and multiple incised lines, punctates , criss-crossing and zig-zag incisions all equally common. Occasionally motifs recognised in the earlier Mwangia phase are identified in early TT/TIW assemblages.	t66 to t148
Later iron-working, farming communities	TT Phase C TT Phase D	1300 1500	Neck Punctate	1250 1500	An overall reduction of decorated sherds, and an increased application of single lines of punctation along the neck is evident along the southern Swahili coast. To the north, TT/TIW motifs continue but are both increasingly simplified and restricted, with stab and punctates often replacing incision.	t149 to t280

Table 7.6 Allocated 'type' numbers relative to existing typological schemas (after Chami, F. 1998 and Horton, M. 1996).

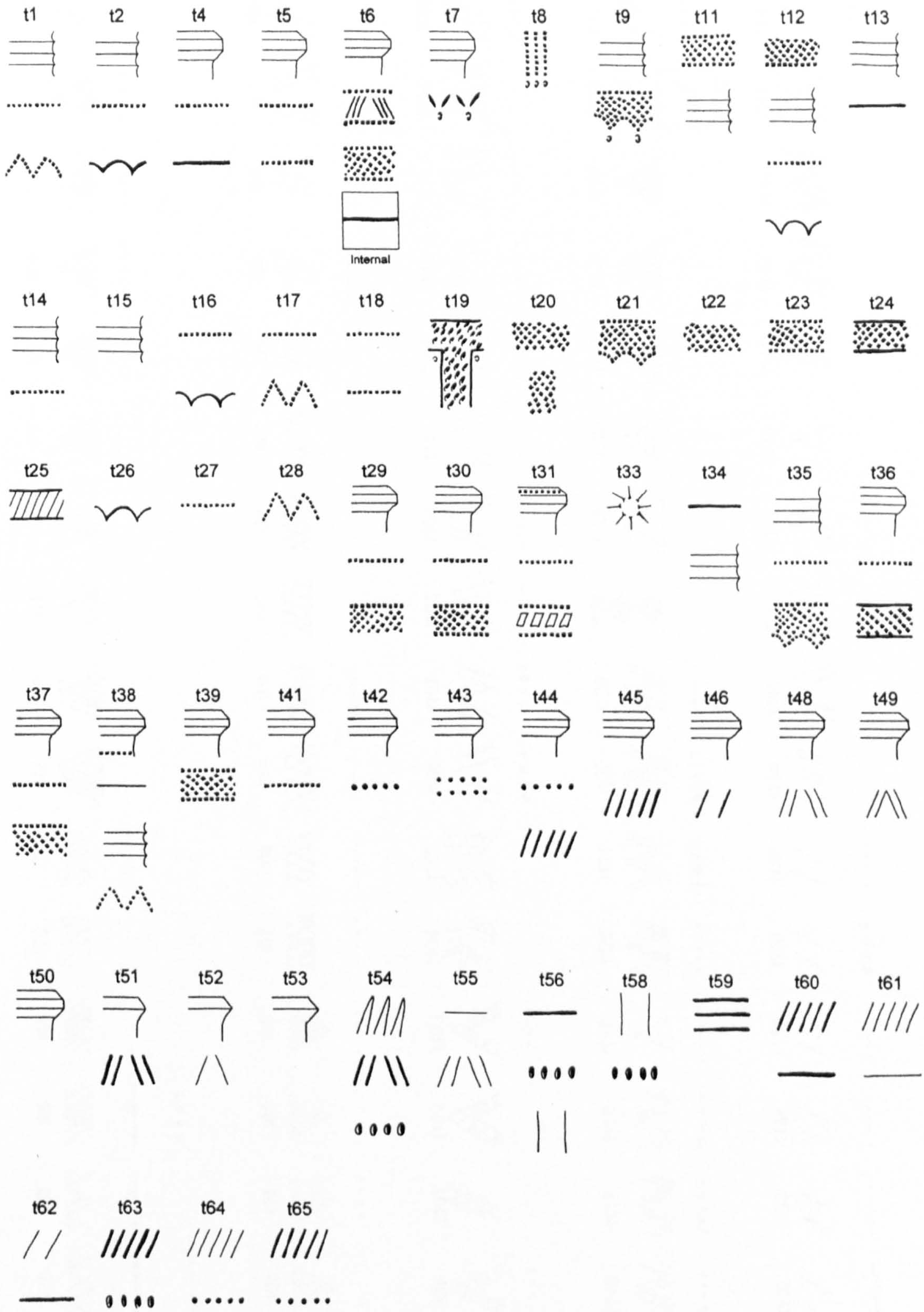


Figure 7.3 Early iron-working, farming decorative 'types'

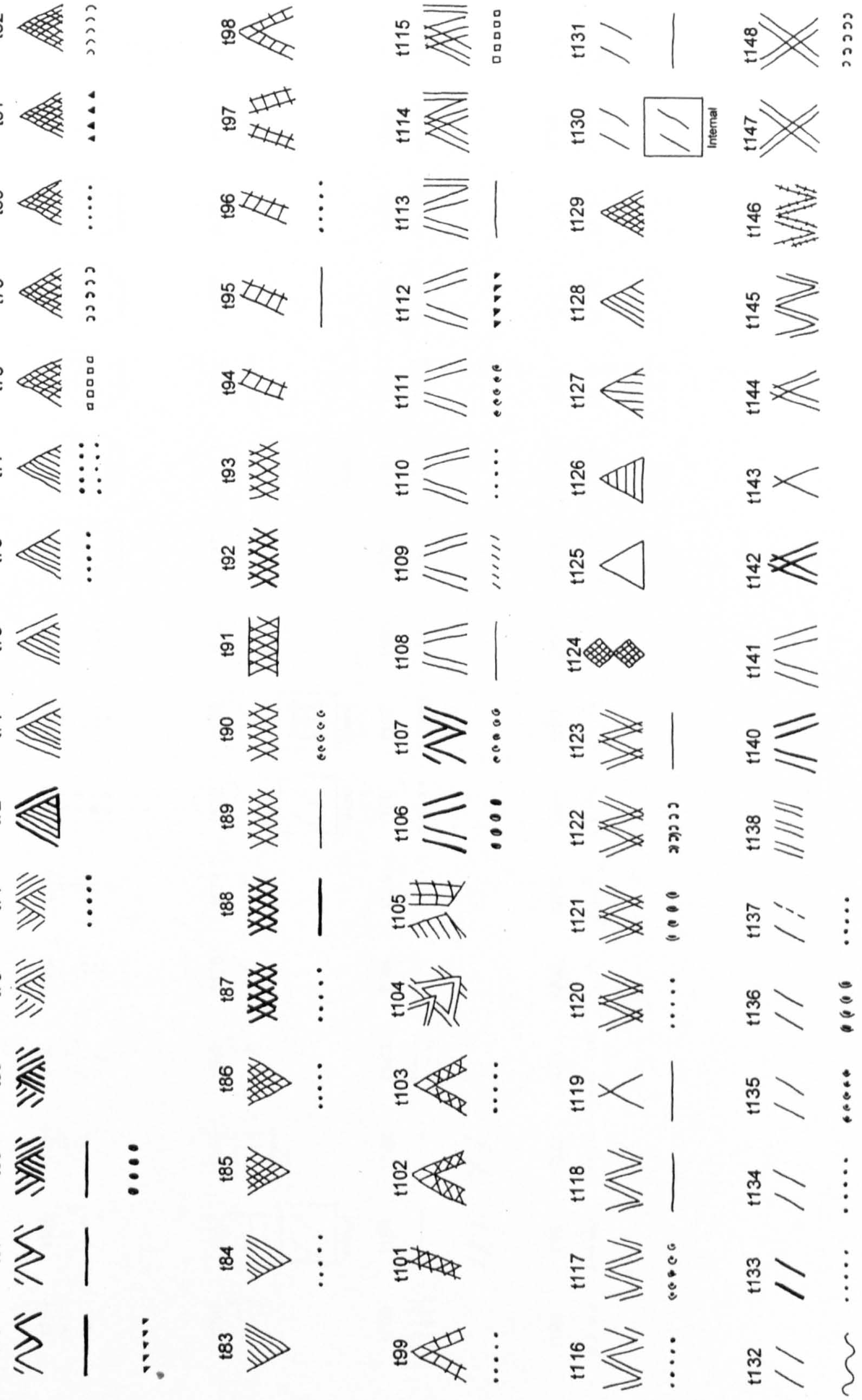


Figure 7.4 Middle iron-working, farming decorative 'types'

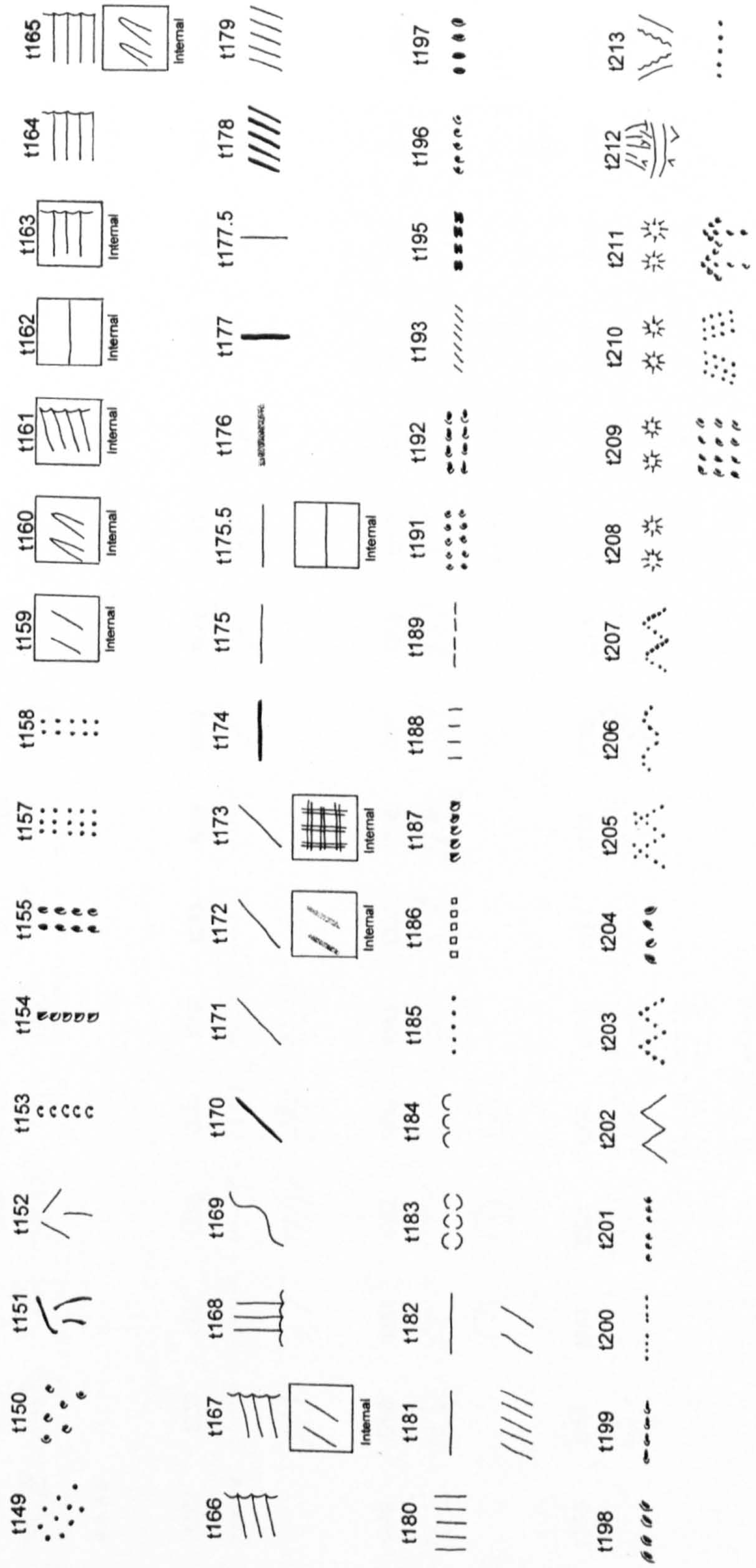


Figure 7.5 Later iron-working, farming decorative 'types' (part i)

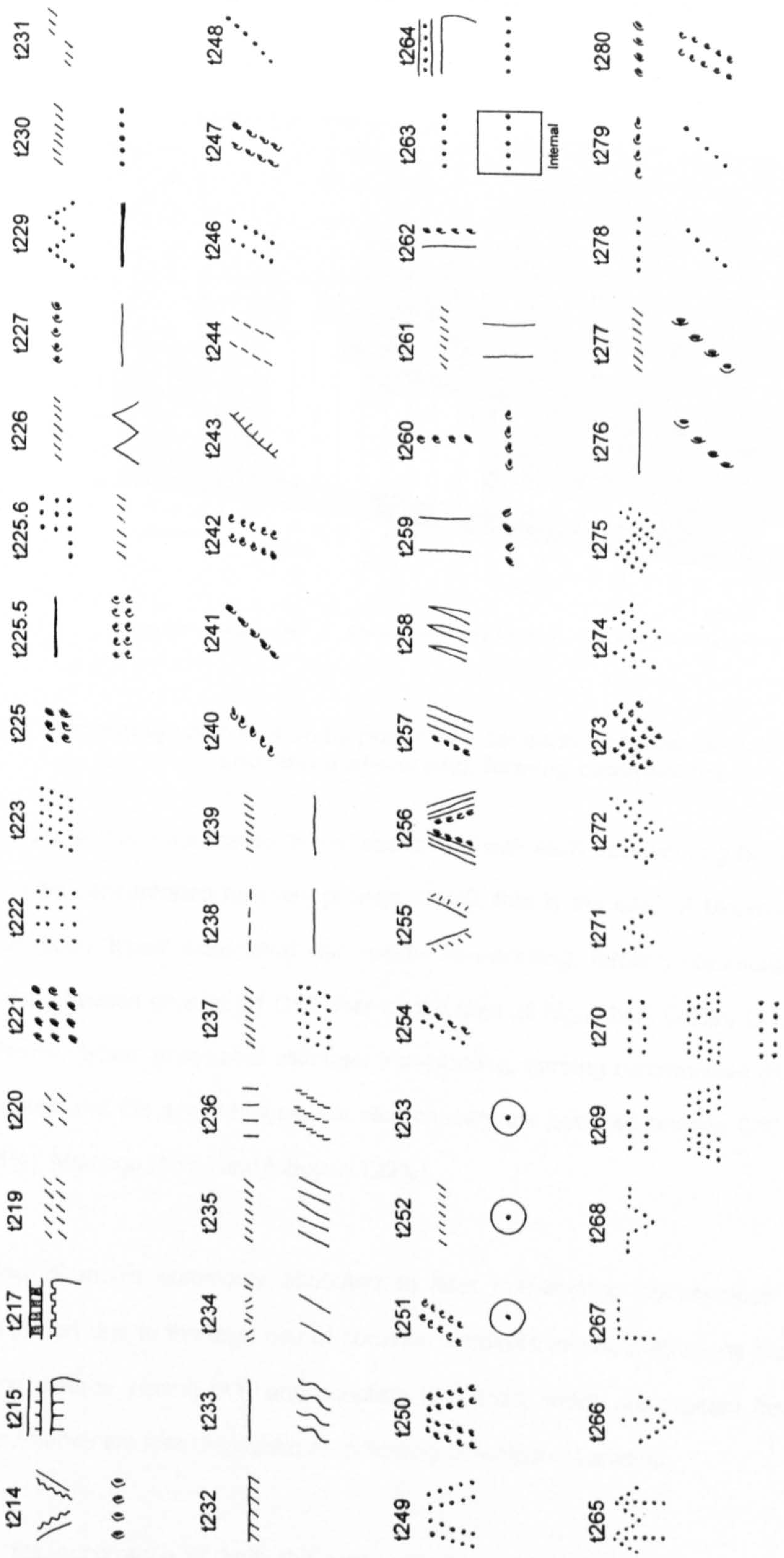


Figure 7.6 Later iron-working, farming decorative 'types' (part ii)

The general validity of the chronological separation of decorative 'types' into the typological sub-groups associated with early, middle and later iron-working, farming communities is illustrated in figure 7.7 below.

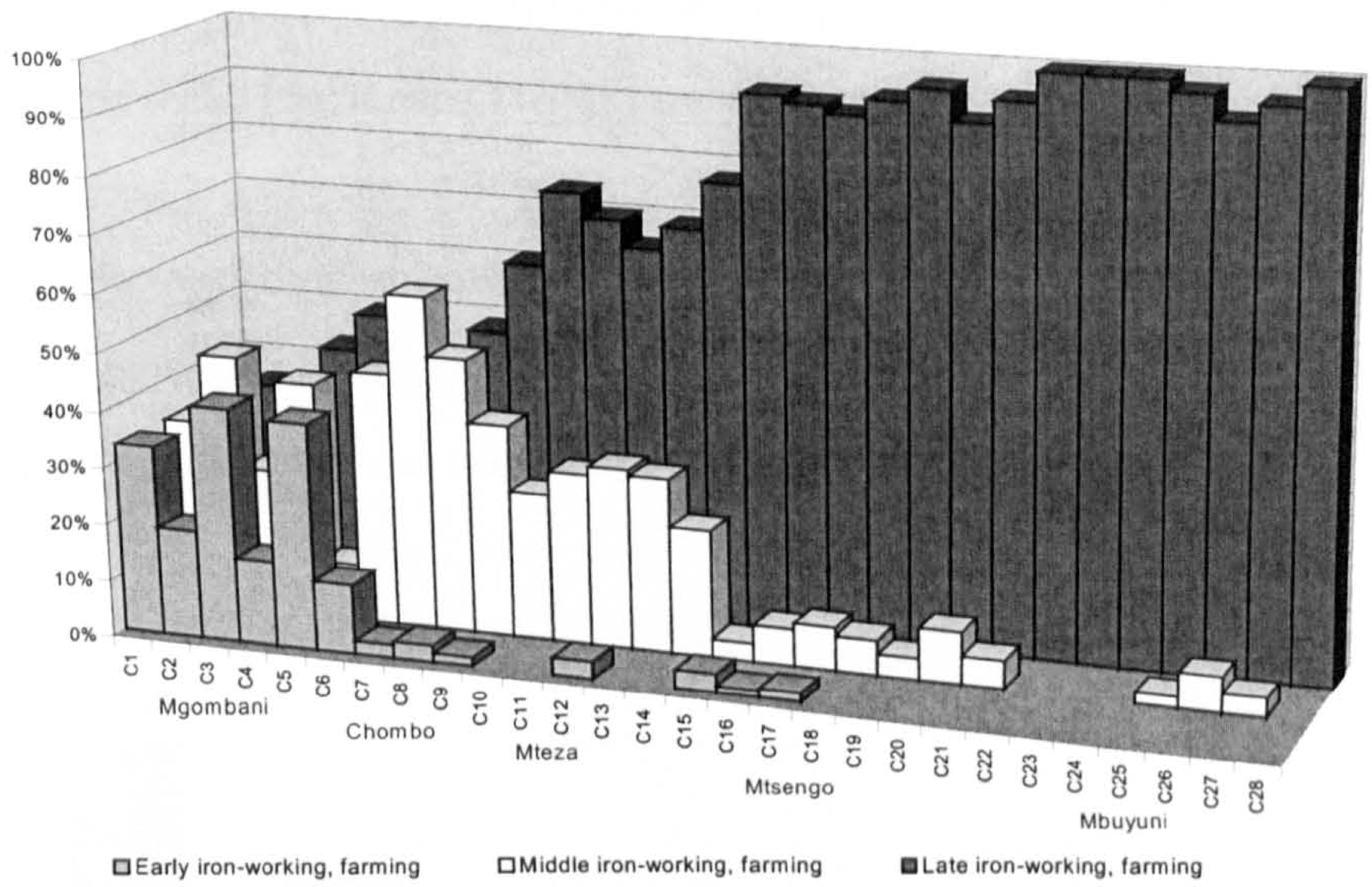


Figure 7.7 Percentage distribution by phase of local ceramic types associated with early, middle and later iron-working, farming communities

A total of 96% of those decorative 'types' associated with early iron-working farming communities (t1-65) are seen to be concentrated between phases C1-C9, that is the sites of Mgombani (78%) and Chombo (18%). Of those 'types' associated with middle iron-working, farming communities (t66-148), 97% are concentrated between phases C1-C13, that is, the sites of Mgombani (25%), Chombo (56%), and Mteza (16%). Finally, 'types' associated with later iron-working, farming communities (t149-280) are seen to be spread through out the assemblages, yet also concentrate between phases C10-C28 within the sites of Mteza (11%), Mtsengo (26%) and Mbuyuni (29%).

The spread of motifs commonly attributed to later iron-working communities through all phases is explained in part due to the later use of common simplistic motifs, particularly those of single horizontal, vertical and oblique incised (A1) and punctate (B1) lines, which are present through all of the periods defined and hence are less diagnostic as indicators of temporal variation.

However, the occurrence of both the early, middle and later iron-working, farming decoration 'types' concurrently within the same phases also reflects a degree of continuity between periods, as decorative 'types' continue to be circulated whilst others fall out of use, and yet new 'types' are introduced. Hence rather than seeing temporally bounded, monolithic and homogenous ceramic groups, a fuzzy and overlapping reality exists, with decorative variation reflecting continuity as opposed to discontinuity. Thus, there is no clear boundary between ceramic assemblages of differing periods. For example, looking at figure 7.7 it is difficult, if not impossible to objectively delimit at which phase one should mark the end of the early iron-working, farming period (that is Kwale or Mwangia ceramic types) from the start of the middle iron-working, farming period (that is early TT/TIW ceramic types).

The number of different decorative 'types' occurring between phases and sites has been used as an indicator of overall decorative variability. This is represented as a percentage of the total possible 'types' which might occur throughout the total assemblage analysed (see figure 7.8 below).

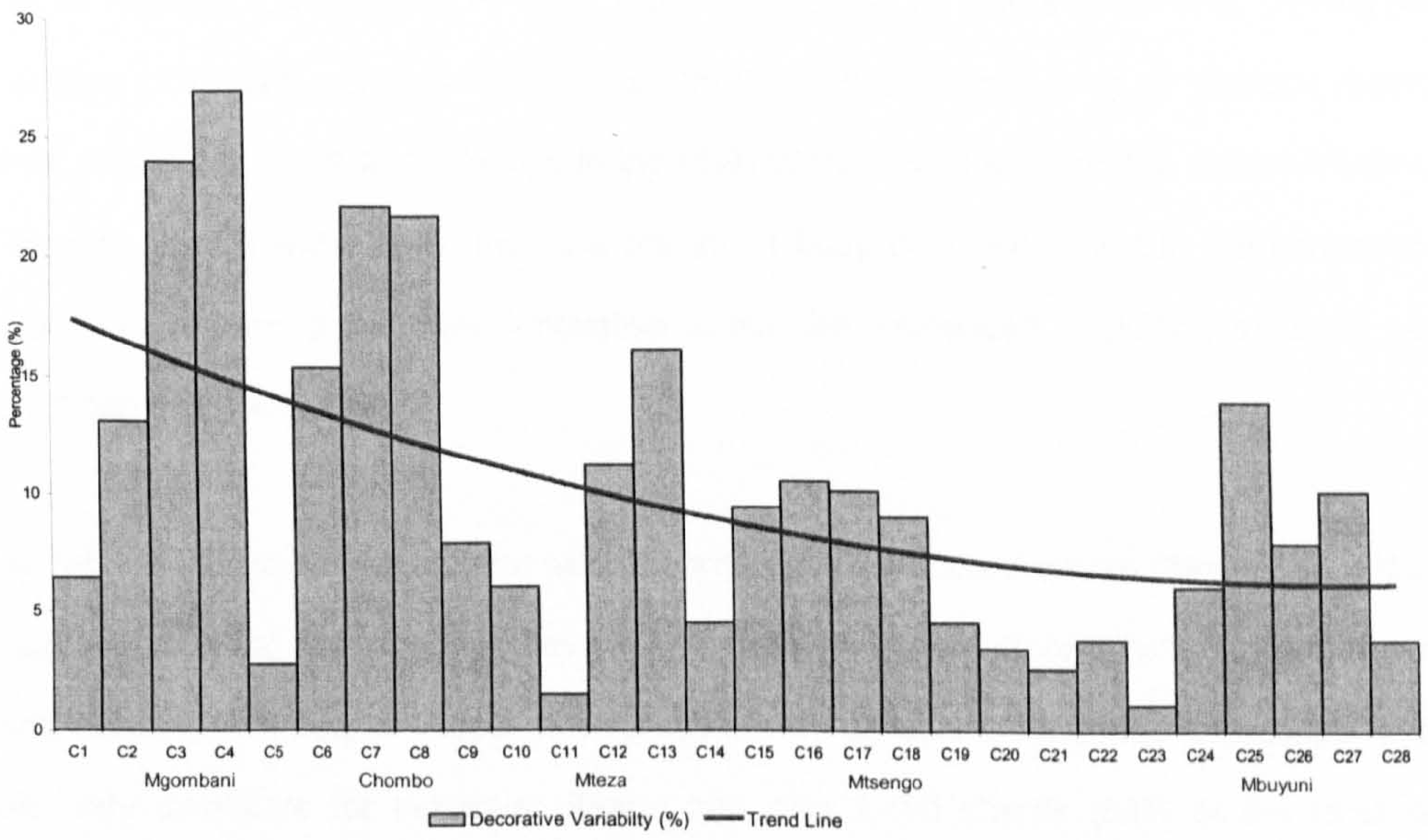


Figure 7.8 Percentage decorative variability by phase

As was seen with the relative decrease in the percentage distribution of decorated to non-decorated sherds by phase (see figure 7.2 above), a decrease in the variability of different decorative 'types' is also evident over time. A total of 45.7% of the overall possible number of decorative 'types' observed are present in the site of Mgombani. This compares with 35.2% at the site of Chombo, 22.5% at the site of Mteza, 26.6% at the site of Mtsengo and 25.5% at the site of Mbuyuni, suggesting that the decorative variability, with minor fluctuation at a phase by phase level, has steadily reduced over time.

7.6.5 Local vessel shape and form

A number of models have been applied to the classification of vessel shape (for a review, see Chami, F. 1994: 74-75). Horton's (1996) final report on ceramics excavated from the site of Shanga has distinguished many different vessel forms, which along with fabric and decoration, are used to establish the 'varieties' inherent in his definition of ceramic types. However, no attempt beyond the descriptive level, is made to explore the confusing variation observed, broadly summarised into jars, bowls, beakers, plates and cauldrons. More recently, Chami (1994, 1998) has drawn attention to chronological variations identified in vessel shape and form. In particular, he notes that the ceramic vessels decorated with motifs attributable to early iron-working, farming communities, whilst including both necked pots and bowls, tend to be globular in shape, the widest part of the vessel generally being wider than the rim, and the height of the vessel being greater than its diameter (Chami, F. 1994: 80). For vessels decorated with the middle iron-working, farming TT/TIW motifs, the necked vessels are seen to have a wider opening, with the maximum body diameter only slightly larger than the neck diameter, a form which Chittick (1974: 320) referred to as 'bag-like' (cited Chami, F. 1998: 210). Moving into the later iron-working, farming period, the gradual decline of TT/TIW motifs is also marked by the frequent occurrence of 'globular restricted and open bowls' (Chami, F. 1998: 211). Hence in the Plain Ware variant seen on the southern coast, necked vessels tend to have a wider neck, than the maximum body diameter, whilst in the continued TT/TIW tradition of the northern coast, new innovative forms are introduced, including vestigial necks and carination (Chami, F. 1998: 212).

Whilst the form of individual vessel parts were recorded using standard curves (Sinclair, P. 1983: 38) the fragmentary nature of the assemblages prevented any similar detailed reconstruction of vessel morphology to be undertaken. Recording of vessel sizes proved to be difficult, often it was impossible to determine maximum body diameters for individual sherds and only 2,480 sherds (62% of the local diagnostic assemblage) gave adequate measurements of rim diameter (see figure 7.9 below). However, variation has been noted in the average thickness of sherds, suggesting that the earlier vessels tend to have been 'chunkier' in their construction (an average 8 mm at Mgombani) than the thin-walled vessels observed in later phases (an average 7 mm at Chombo, Mteza and Mtsengo; and an average 6 mm at Mbuyuni).

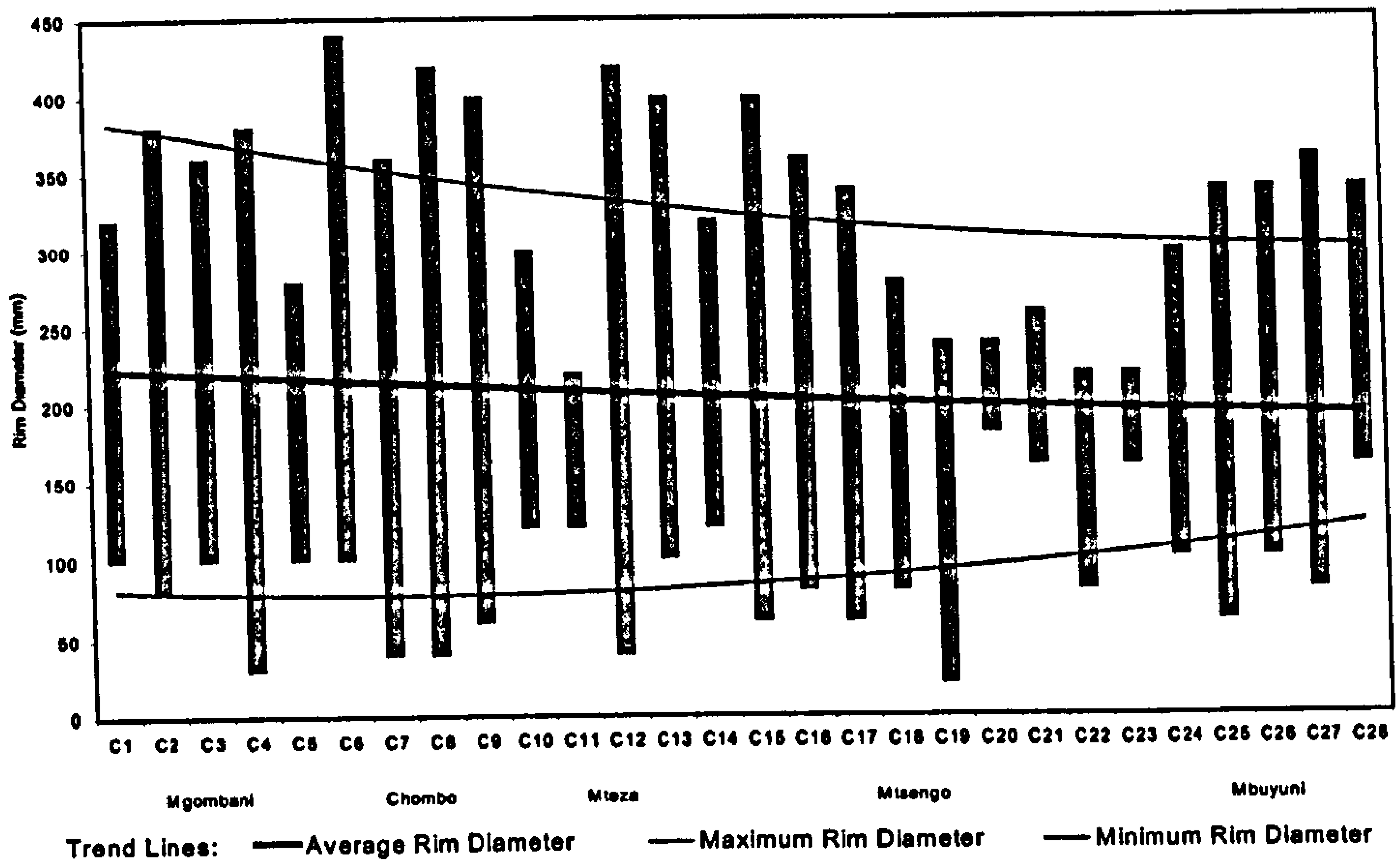


Figure 7.9 Minimum, maximum and average rim diameters (mm) by phase

The recording of vessel parts does allow us to classify the fragmented sherds into seven shape categories which provide an idea of the stylistic and functional aspects of vessel structure (see table 7.7 below). These categories are specifically adapted for sorting broken sherds into shape groupings (Sinclair, P. 1983: 43), and have become common place in recent studies of ceramics from iron-working, farming sites (Chami, F. 1994; Jama, A. 1996; Morais, J. 1988; Pwiti, G. 1995).

Shape Category

Shape 1 R; Bo/Ba; Bo; Ba
(any vessel shape)
Shape 2 R/N; N
(either dependant or independent restricted jars)
Shape 3 Sh/Bo/Ba; Sh/Bo; Sh
(either independent restricted jars or restricted bowls)
Shape 4 R/N/Sh/Bo/Ba; R/N/Sh/Bo; R/N/Sh; N/Sh/Bo/Ba; N/Sh/Bo; N/Sh
(independent restricted jars)
Shape 5 R/N/Bo/Ba; R/N/Bo; N/Bo/Ba; N/Bo
(dependent restricted jars)
Shape 6 R/Sh/Bo/Ba; R/Sh/Bo; R/Sh
(restricted bowls)
Shape 7 R/Bo/Ba; R/Bo
(unrestricted bowls)

Key: R=Rim; N=Neck; Sh=Shoulder; Bo=Body; Ba=Base

Table 7.7 List of shape categories (after Sinclair, P. 1983: 43)

To varying degrees, the seven categories represent a possible total of four vessel shapes: these are independent restricted jars, dependent restricted jars, restricted bowls and unrestricted bowls, summarised in the last four shape categories respectively. The structural data given in categories 1, 2 and 3 is of only limited use, due to the fragmented nature of the sherds. Hence, category 1 can relate to any shape since all vessels must include a rim, body and base parts. Category 2 might relate to either dependant or independent restricted jars. Category 3 might relate to either independent restricted jars or restricted bowls.

As defined by Nordström (1972: 71), restricted vessels are those vessels where the rim diameter is less than the maximum body diameter. Unrestricted vessels on the other hand, are those vessels where the rim diameter is greater than the maximum body diameter. Amongst necked restricted vessels, a further distinction is made between those vessels with an inflected neck profile, otherwise termed independent restricted, and those with a composite neck profile, or dependent restricted vessels (Chami, F. 1994: 75). Necked vessels are here defined as jars. Vessels without necks are defined as bowls. The four vessel shapes are illustrated in figure 7.10 below.

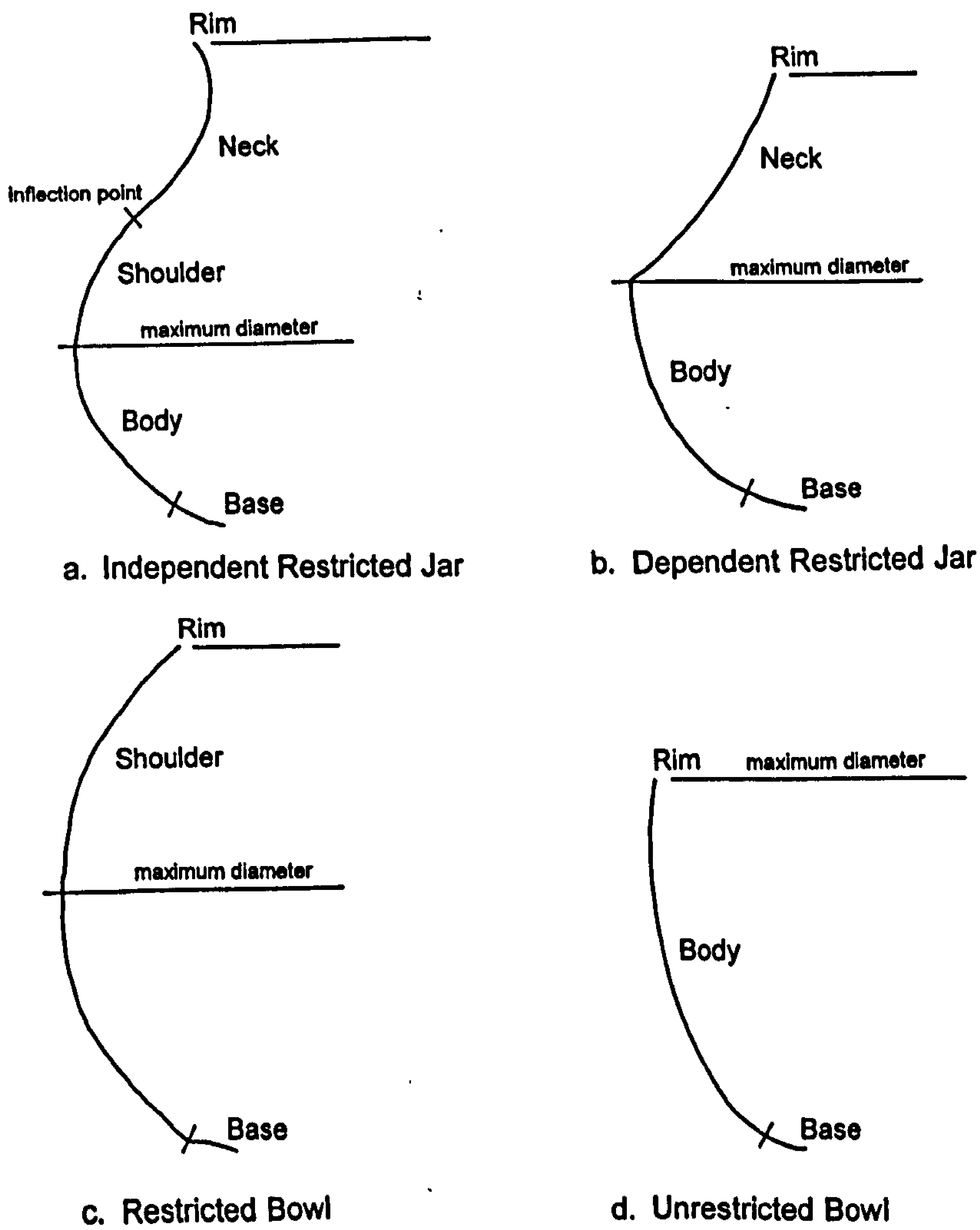


Figure 7.10 Simplified vessel shape categories (after Chami, F. 1994: 78, fig. 22).

The frequency of occurrence for the seven shape categories in each site is represented in table 7.8 below. Of all the shapes present, category 2 vessels, either dependent or independent restricted jars, are the most prevalent (32.6% of the total assemblage analysed), followed by category 6, restricted bowls (24.0%). These are followed, in order of greatest frequency, by category 3, either independent restricted jars or restricted bowls (9.8%); category 7, unrestricted bowls (9.3%); category 4, independent restricted jars (6.9%); and category 5, dependent restricted jars (2.9%). Category 1, which includes sherds too fragmented to be associated with any specific vessel shape, constituted 14.5% of the total assemblage analysed.

Shape Category	Mgombani	Chombo	Mteza	Mtsengo	Mbuyuni
1 (any vessel)	65	129	86	229	67
2 (restricted jars, either dependant or independent)	268	546	153	303	29
3 (either independent restricted jars or restricted bowls)	104	68	32	140	46
4 (independent restricted jars)	83	109	34	31	17
5 (dependent restricted jars)	9	52	33	20	3
6 (restricted bowls)	35	98	94	234	493
7 (unrestricted/open- bowls)	35	61	42	160	72
Total Sherd Count	**599**	**1063**	**474**	**1117**	**727**

Table 7.8 Frequency of shape categories by site

Chami's (1994: 79) analysis of excavated ceramics from Tanzania suggested that there was a tendency for the early iron-working, farming sites to have a greater proportion of jars than that observed in later periods. As a comparative evaluation, the shape categories have here been used to compare the proportional variation between restricted jars (dependent and independent) and restricted and open-bowls. The distribution of jars is calculated as the percentage of the total frequency of categories 2, 4 and 5 by phase, and a similar calculation is made for the distribution of restricted bowls by category 6 and open-bowls by category 7 (see figure 7.11 below).

As is clearly seen in figure 7.11, there is a marked decrease in the presence of restricted jars between the early, middle and later iron-working, farming sites. This is reflected by a corresponding increase in the use of restricted bowls, particularly from phase 23 onwards, and a parallel, but less marked increase in the use of open-bowls. It is tempting to associate changes in the proportion of vessel shapes used, to functional shifts in the communal activities of food storage, cooking and eating (that is, restricted jars, restricted bowls and open-bowls respectively).

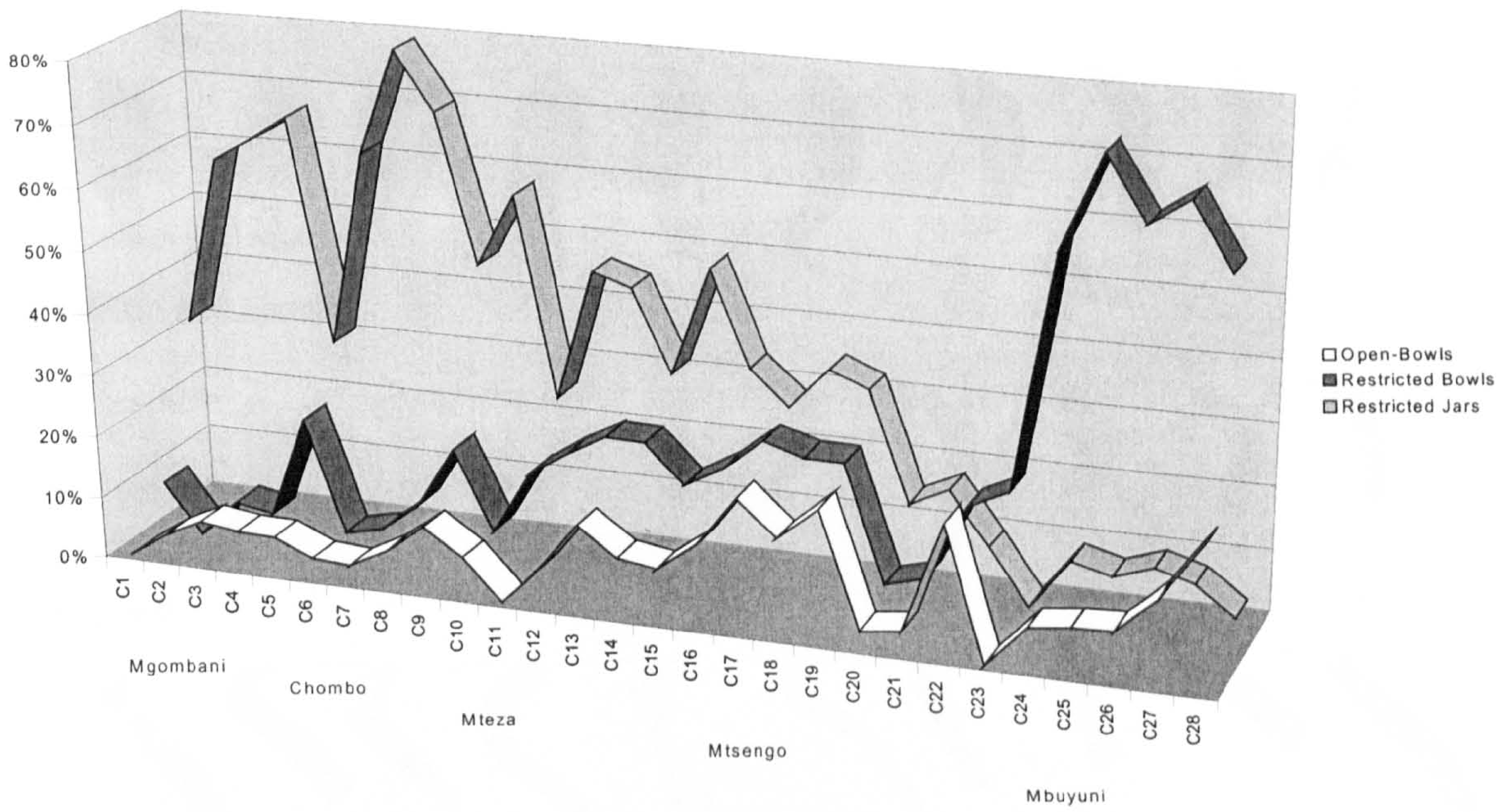


Figure 7.11 Percentage distribution of restricted jars, restricted bowls and open-bowls by phase

However, whilst clear temporal variation is evident between the five excavated assemblages, it should be noted that the shape categories alone do not necessarily imply functional use (for example, see Mutoro, H. 1987: 126-128; Ndiri, W. 1992).

7.6.6 Rim form

Variations in the forms of rims were recorded, and six rim form categories identified: bevelled/fluted, in-turned, out-turned, squared, trumpeted and rounded. These were primarily based on the lip type of each rim, which were not necessarily constrained by the overall shape category of each sherd. A selective sample of each form is illustrated in figure 7.12.

An examination of the distribution of rim forms by excavated phases suggest that out of the six categories identified, two rim forms (bevelled/fluted and trumpeted) reflect a strong temporal trend. A total of 72% of bevelled/fluted rims occur at the site of Mgombani, with an intermittent and corresponding decline in frequency between the sites of Chombo, Mteza and Mtsengo, where the bevelling/fluting is much less pronounced (motif D5). Trumpeted rims, on the other hand, whilst occuring from phase 3 onwards, concentrate in the later sites of Mtsengo (61%) and Mbuyuni (35%). The four remaining rim forms, in-turned, out-turned, squared and rounded, occur on all five excavated sites with no clear temporal pattern identified in the data analysed (see figure 7.13 below).

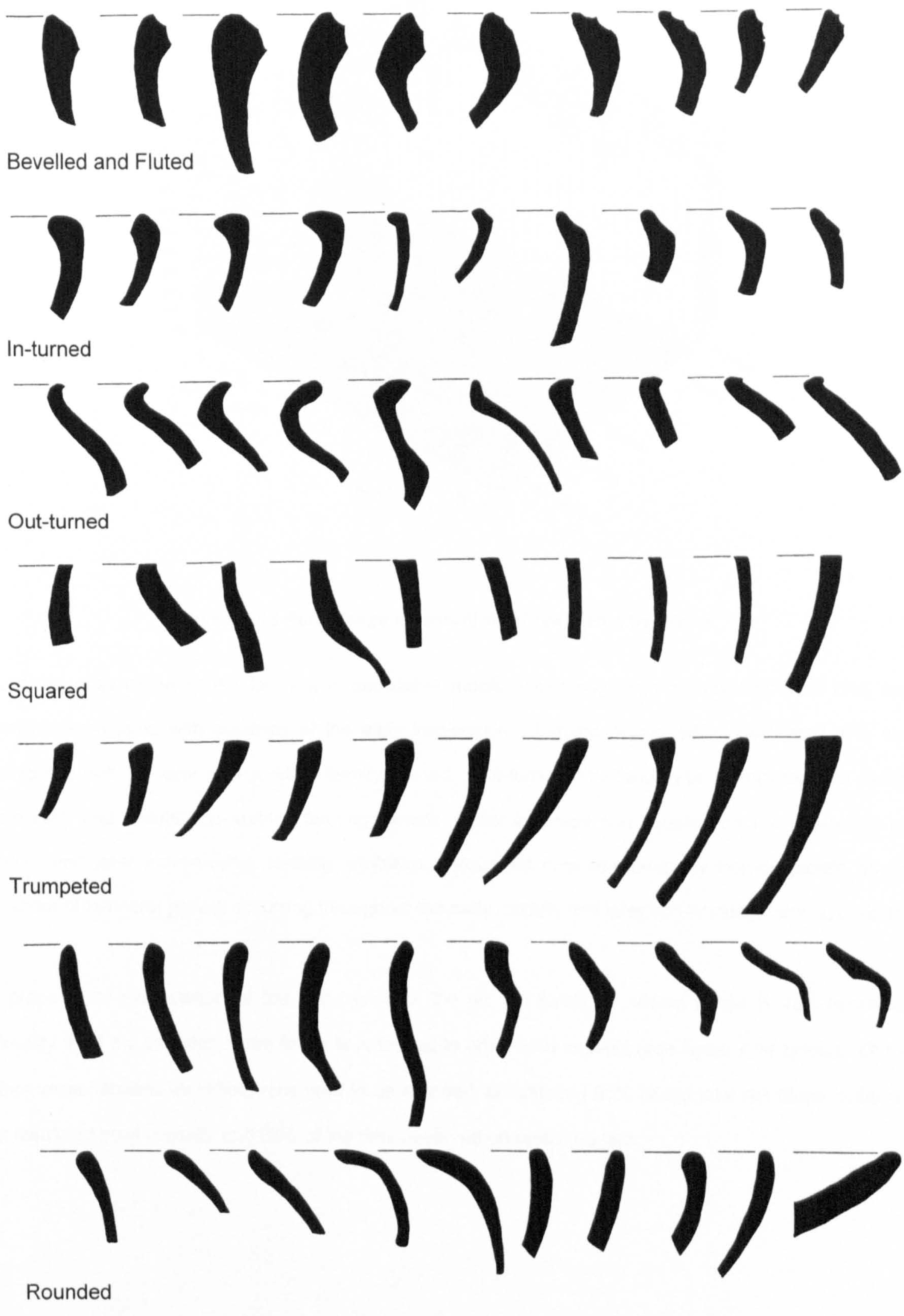


Figure 7.12 Sample rim forms

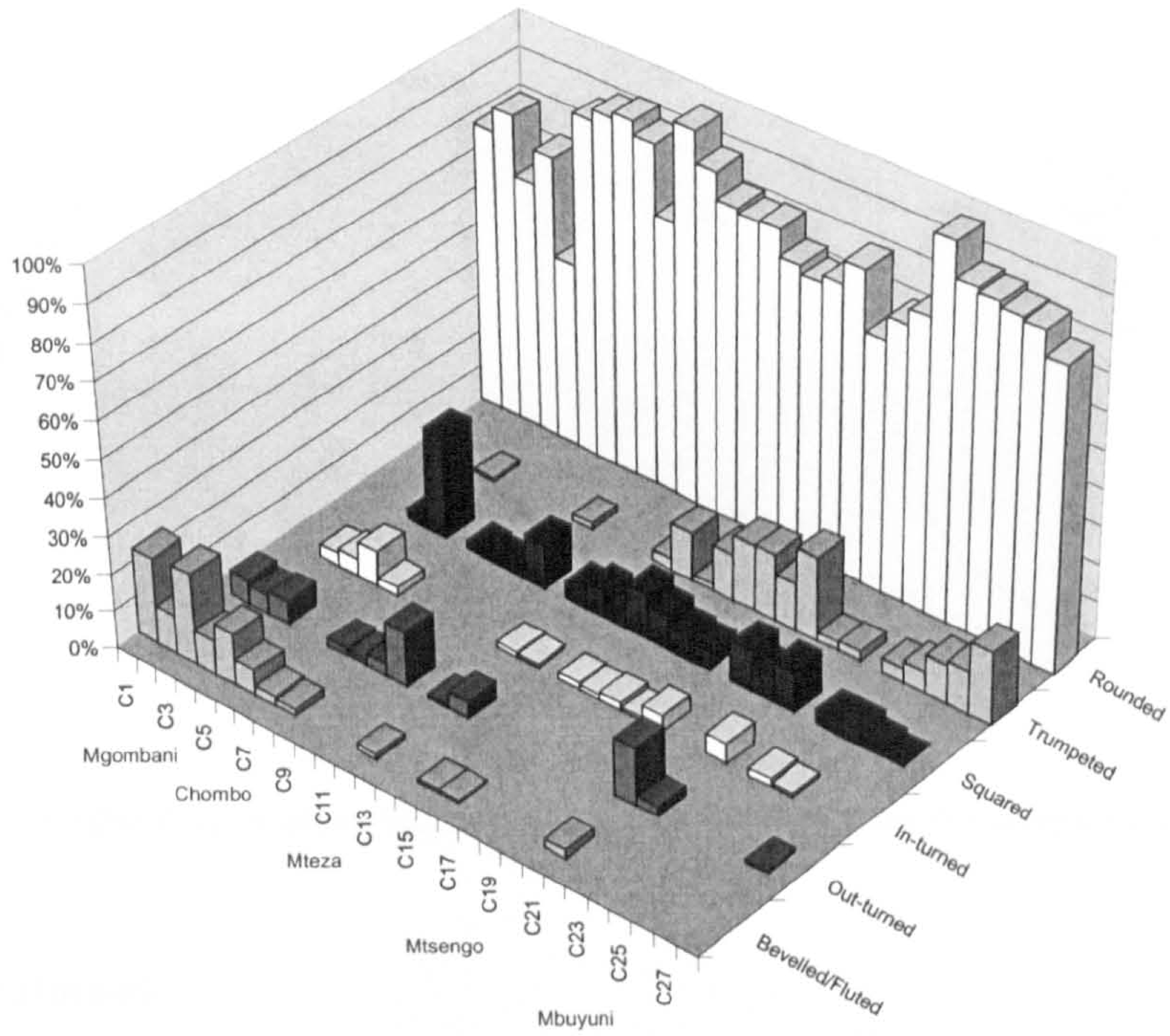


Figure 7.13 Percentage distribution of rim forms by phase

However, observation of rim forms and decorative motifs would suggest that bevelled/fluted rims are primarily associated with ceramics of the early iron-working, farming period, whilst trumpeted rims are associated with the later iron-working, farming period. Out-turned rims tend to be associated with motifs from early and middle iron-working farming periods, whilst in-turned and squared rims are identified as middle and later iron-working, farming attributes. Rounded rims are relatively non-diagnostic as an indicator of temporal period, occurring throughout the early, middle and later iron-working, farming periods.

A proportional examination of the occurrence of the six rim forms by vessel shape is also revealing. Virtually all of the variation in rim forms is restricted to open-bowl vessels (see figure 7.14 below). Of the other vessel shapes identified, rims tend to be rounded, constituting 95% of the total rim forms observed on restricted bowl vessels, and 88% of the rims observed on restricted jars.

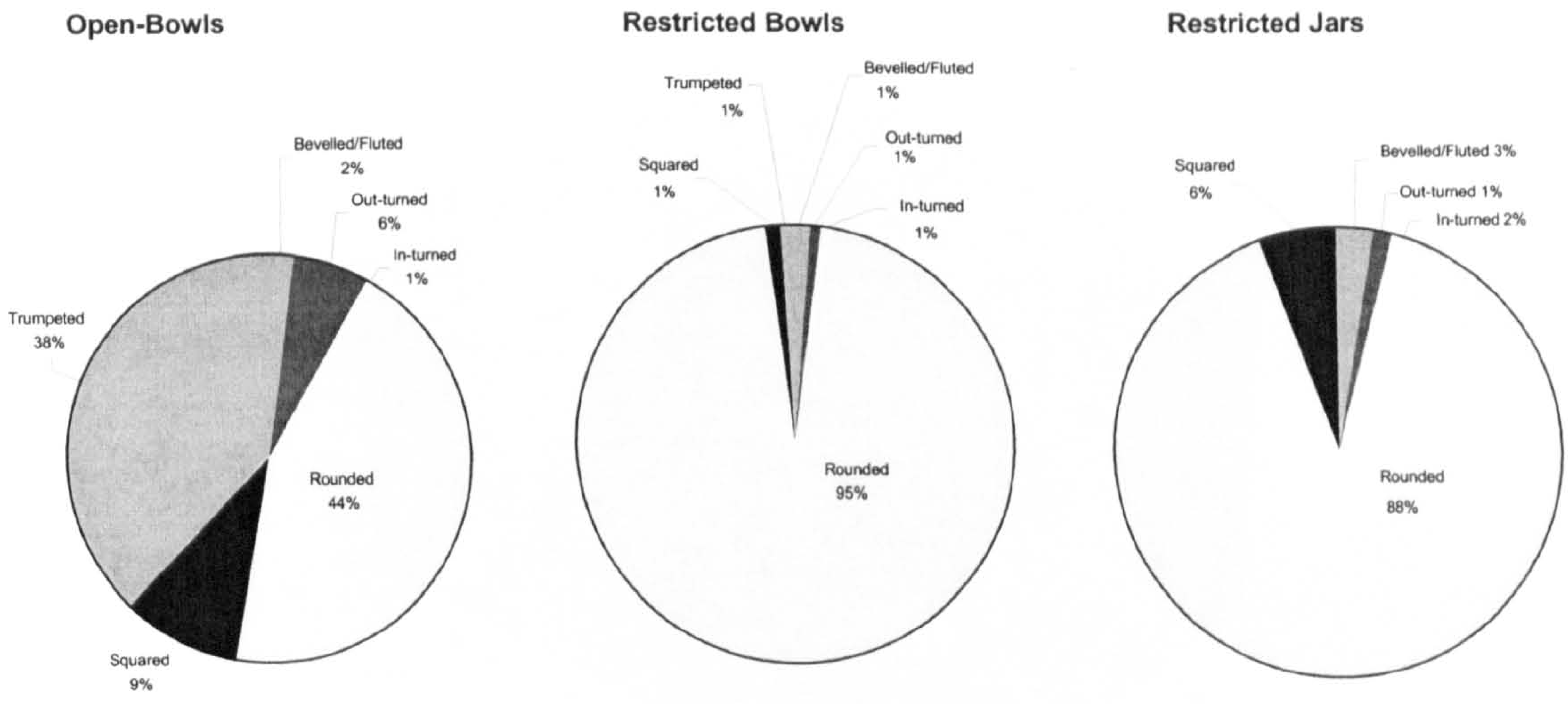


Figure 7.14 Pie Charts showing percentage variation of rim form by vessel shape

7.6.7 Surface treatment

A corresponding pattern is evident for the surface treatment of vessels. The surface treatments identified on the sherds from the five excavated assemblages were not considered to be part of the integral decorative design of a vessel (for example, see Krause, R. 1990: 718), and for this reason have been treated separately. From the five excavated site assemblages, 86% of sherds analysed had no surface treatment to speak of, but instead were left plain. Where purposeful surface treatment was identified, then burnishing, slips of red haematite and/or brushing of the semi-dry clay with grass stalks predominate. All of the surface treatments exhibit a degree of temporal ordering, the earlier phases being characterised by burnished vessels, followed by the later innovations of slipped, brushed and slipped and brushed surfaces respectively. With the exception of burnishing, all of the surface treatments, once introduced, continue to remain popular throughout the later stratigraphic phases (see figure 7.15).

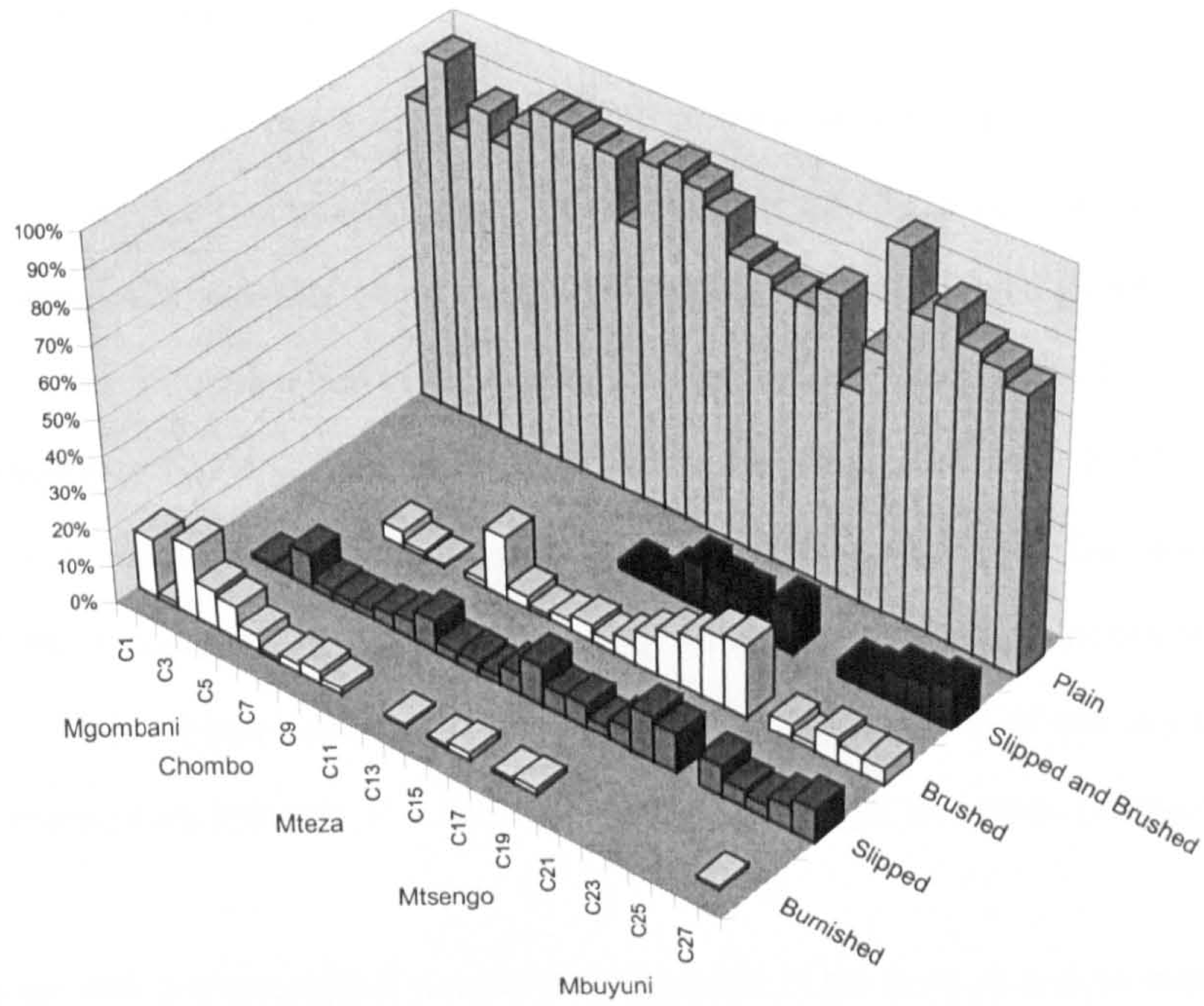


Figure 7.15 Percentage distribution of surface treatment by phase

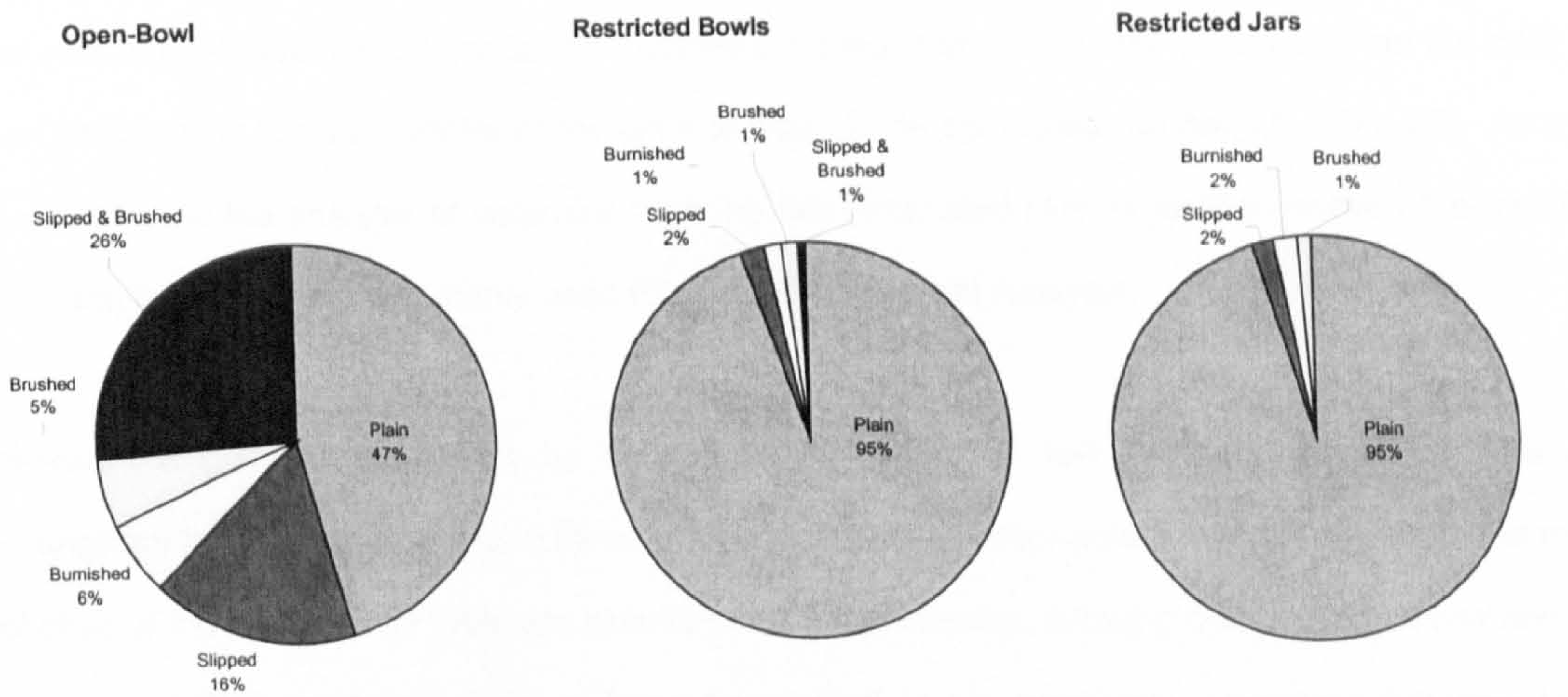


Figure 7.16 Percentage distribution of surface treatment by vessel shape

Again, a proportional analysis was made of the occurrence of surface treatments by vessel shape. As with rim forms, it would seem that greatest variability in surface treatment is represented on open-bowls. Of the other vessel shapes identified, 95% of both restricted bowls and restricted jars received no surface treatment whatsoever (see figure 7.16 above).

7.7 Correspondence Analysis

Previous ceramic typologies are primarily dependent on decorative attributes as an indicator of stylistic, and by assumption, cultural and ethnic affiliation. For this reason, the 'type' combinations of the decorative motifs identified above were explored using Correspondence Analysis[3]. Whilst Correspondence Analysis as a technique for data reduction, has been available since the late 1960s (Benzécri, J. *et. al.* 1973), its application in archaeology has only been popularised since the 1980s (Bølviken, E. *et. al.* 1982). Despite continuous references made in the archaeological literature (Baxter, M. 1994; Djindjian, F. 1985, 1990; Madsen, T. 1988; Slachmuylder, J. L. 1995; Shennan, S. 1997), it still remains a poorly utilised method. In the context of East Africa, it has been tentatively applied in the comparison of site assemblages, both on 'Later Iron Age' ceramic data (Sinclair, P. 1983), and 'Later Stone Age' tool types (Walker, N. 1995).

As is often the case with archaeological data when organised in the form of a data matrix or contingency table, a distinctly uneven or unbalanced distribution of both very large and very small or zero frequencies is common (see Appendix D). Hence, archaeologists will often seek to lump groups of attributes together to form more 'meaningful' distributions. However, Correspondence Analysis allows us to escape this problem through its ability to weight the influence of different variables to compensate for their respective occurrence in archaeological contexts. Emphasis is placed on the 'shape' inherent within the data, rather than variations in the frequencies of the units or types to be compared (Baxter, M. 1994: 22). As a result, its utilisation in the analysis of ceramics from the five excavated sites is justified above other multivariate approaches such as the commonly used Principal Components Analysis.

Correspondence Analysis might be viewed as a means of re-expressing numerical data from a contingency table in a pictorial form for ease of interpretation (Greenacre, M. 1993; 85). Both the rows and columns of the contingency table are simultaneously represented, allowing both individual row and column profiles and their interrelationship or 'correspondence' to be assessed. Distances between individual variables are measured in a multi-dimensional space. In this way row and column variables that appear similar to one another, for example, the stratigraphic phases with a similar distribution of ceramic 'types', or ceramic 'types' which frequently occur together in the same stratigraphic phase, will appear closer to each other than variables with a different profile. However, it is important to realise that the relative distances between both row and column variables do not provide any direct conclusion as to the meaning of the data

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[3] Correspondence Anaylsis was undertaken using the Bonn Archaeological Statistics Package (BASP) for Windows Version 5.3. This package has the advantage of colour differentiation between units, types and predetermined groups.

being analysed. Rather, it provides an exploratory tool through which interpretations might be suggested. Whilst patterns within the data might clearly be present, ultimately the justification of any interpretation of such patterning becomes an archaeological rather than statistical problem (Baxter, M. 1994; 104).

How then does Correspondence Analysis work? Correspondence Analysis operates by calculating the row and column profiles by adding up the total row or column frequencies as illustrated in Appendix D, and dividing by their sums. Each profile is then given a weight or 'Mass', which is calculated as a proportion of the average row or column profile. This 'Mass' is relative to the observed number of counts in each row or column of the contingency table. Thus row or columns with the largest number of observations will have the larger 'Mass' and therefore be more influential in the analysis than those with a lower number of observations and a smaller 'Mass'. Each row and column profile is then compared using a chi-squared distance measure. This is obtained from a measure of the discrepancy between the observed frequency in each row and column profile and a hypothetical expected frequency, hence providing a measure of how far the row or column profiles are from their average profile (Greenacre, M. 1993; 25-29). In other words, the chi-squared distance measures the variance between observed and expected frequencies and allows us to ask whether these differences are so large that they must derive from factors other than chance alone. The measured chi-squared distances are then plotted in the form of Euclidean distances on a graphical plot.

In the first instance, all of the identified decoration 'types' and excavated phases have been included in the analysis. The fabric attributes were not used in the Correspondence Analysis as they are seen to be localised within sites and would thus generate an artificial separation between decorative 'types' if included. The resulting 'correspondence' is represented in the form of a bi-plot of the first two dimensions below (see figure 7.17).

The plot is seen to form a clear pattern in the distribution of both types and phases, and can be interpreted as a continuous linear distribution along a regular curve from the upper left hand corner, through to the upper right hand corner. This 'shape' is known as a parabolic curve, but sometimes referred to as the 'horse-shoe' or 'Guttman' effect, and arises where a strong serial structures exists in the data, whereby '*a single dominant influence is reproduced on the first dimension or axis, with the second axis being approximately a quadratic function of the first*' (Madsen, T. 1988 fig. 11). This single dominant influence can be one of any number of possible factors, including chronological, spatial or social ordering. In the case of the excavated assemblages, it is clear that this is chronological.

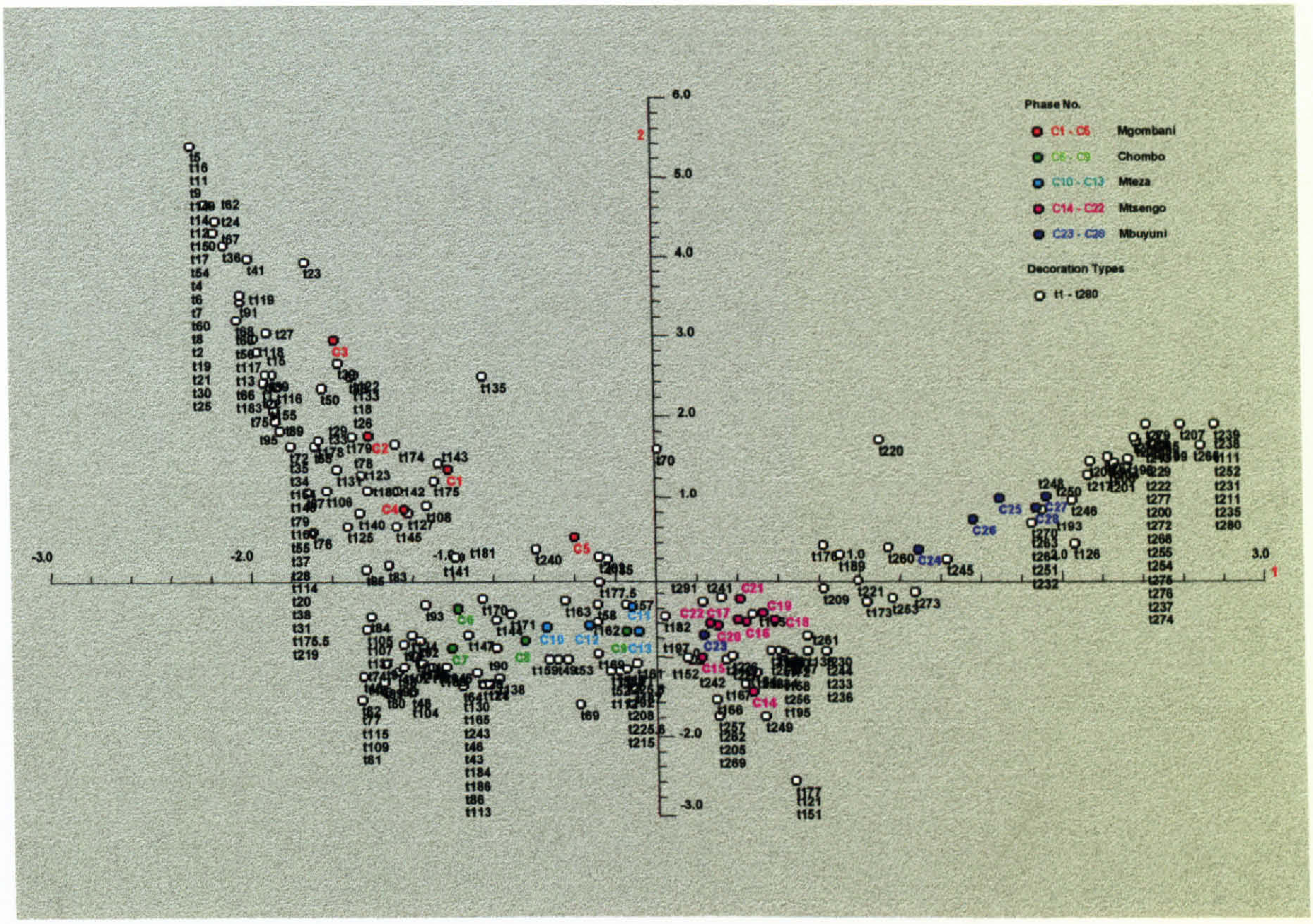

Figure 7.17 Correspondence Analysis plot of decoration types and excavated phases

Rather than forming five independent and separate concentrations, which one would expect if the ceramics from each site were unrelated, they are instead distributed along the first or principal dimension, with the earliest phases and decorative 'types' situated to the left hand side and the latest phases and decorative 'types' on the right, with intermediate phases and decorative 'types' situated between. Hence the parabolic distribution is seen to represent an approximately correct, if somewhat unrefined chronological order, which corresponds to the already existing broad typological schema outlined above (see section 6.5.4). To reduce the plot density, it is possible to view either the phases or 'types' separately. Figure 7.18 represents a plot of the excavated phases only.

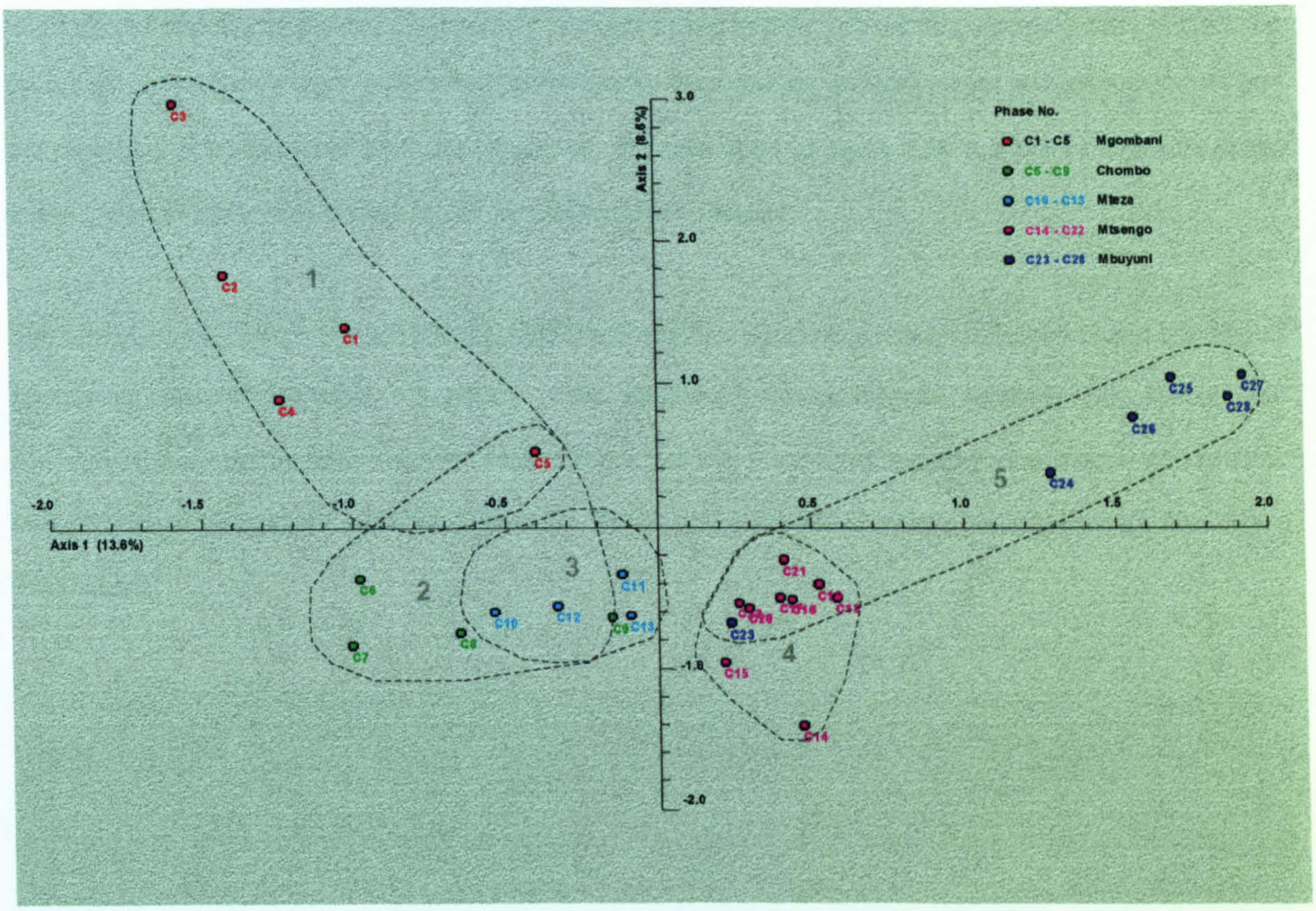

Figure 7.18 Correspondence Analysis plot of the excavated phases with site groups marked

It is immediately evident that the ordering of phases within individual sites do not appear in their exact stratigraphic order as excavated. This is partially because the exact location of phases is not only determined on the basis of the occurrence of decorative types, but are also influenced by the number of incidences present. Hence phases will occur closer to the decoration types which are most abundant, and vice versa. However, it can also be a product of background 'noise' either, because phases share a mixture of decorative 'types' and therefore cannot be separated into an exact chronological order purely on the singular basis of a decorative typology, or because there has been previous disturbance of the excavated layers.

Nevertheless, the phases do form clearly defined groups, which correspond well with the five excavated sites. Their distribution confirms the relative chronological ordering of the five sites outlined above (see section 6.5.4), yet also reflects a partial 'chronological' overlap between neighbouring sites. Hence, the final phase at Mgombani, phase 5, is seen to overlap with the Chombo group, and the final phase at Chombo, phase 9 is seen to overlap with the Mteza group. No overlap exists between Mteza and Mtsengo, but the earliest phase at Mbuyuni is seen to fall within the Mtsengo group. On this basis, it is possible to argue that the five assemblages represent a chronological continuum, between the early iron-working, farming site of Mgombani (group 1), through to the middle iron-working, farming sites of Chombo (group 2) and Mteza (group3); and between the middle iron-working, farming site of Mtsengo (group 4) and the later iron-working site of Mbuyuni (group 5). As was seen in figure 6.6, the results are acceptable within the chronology established by the five radiocarbon samples.

The continuum is further demonstrated by differentiating the decoration 'types' into their broad typological groups as identified in table 7.6 above. The resulting Correspondence Analysis plot, rather than distinguishing disparate groups, again demonstrates that there is a linear typological evolution with gradual and overlapping transitions between the early, middle and later iron-working, farming periods (see figure 7.19 below).

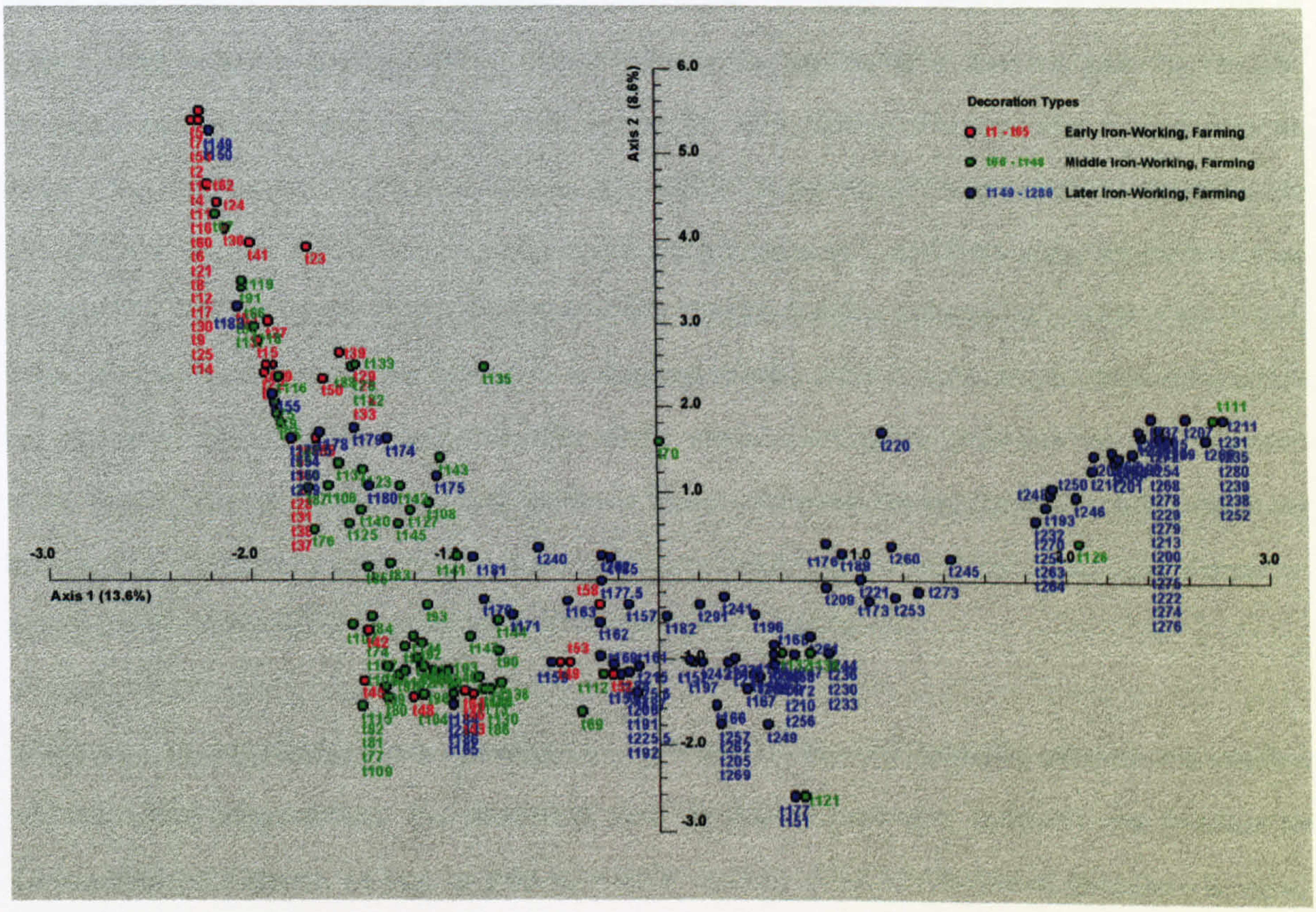

Figure 7.19 Correspondence Analysis plot of decoration 'types' with typological groups marked

The absence of any clear divergence or break in the distribution of 'types' suggests that the excavated ceramics, at least stylistically represent a single evolving tradition from the early iron-working, farming period onwards. In this sense, the results from Correspondence Analysis give strong support to Chami's (1994; 1998) assertion for regional typological continuity. Furthermore, the plot emphasises the artificial nature of previous typological classifications (we can no longer ignore 'residual' or typological 'outliers') and, thus escapes from the previous construction of artificial boundaries between ceramic groups which were then used, in part to justify a false sense of discontinuity between assemblages of differing periods.

How might we evaluate these results from the Correspondence Analysis? The original contingency table can be reordered to reflect the relative ordering of decoration 'types' as shown on the first dimension or principle axis (see Appendix F). The improved structure of the data is then much easier to detect (compare appendix D before Correspondence Analysis was carried out, with appendix F), and should help in making an assessment of the individual decorative 'types'; that is, whether or not a specific 'type' occurs frequently or not, and whether it has a short or a long chronological span.

In addition, the total variation between profiles and their average can be summarised in the form of a 'total inertia' score, that is, the weighted average of the squared chi-squared distances between the row or column profiles and their average profile. Hence the lower the 'total inertia' is, then the lower the variation is from the average column or row profiles (Greenacre, M. 1993; 29-31). It is preferable to account for as much of this 'total inertia' in as few dimensions as possible. In the above Correspondence Analysis plots only 22.2% of the total inertia is represented, 13.6% along dimension 1, and 8.6% along dimension 2 (see Appendix E). Thus, a total of 78.8% of the total inertia remains in higher dimensions outside of the bi-plot. Whilst low inertias are valid, they commonly represent a greater level of noise across dimensions which are often more difficult to interpret. This often results when a contingency table has low row or column totals; hence, many of the variables have too low a 'Mass'. However, we can assess the influence of the individual contributions by each variable to the percentage 'total inertia' of each dimension (this is given on a parts per thousand (‰) scale in the column headed 'Inr' of Appendix E).

In this way, we can identify those variables that might overshadow any emerging patterns and interfere with the overall interpretation. The removal of such variables is commonly justified in the literature for Correspondence Analysis, so long as their removal is carefully noted and examined (Bølviken, E. *et. al.* 1982; 56-57). If desired, such excluded variables can then be repositioned within the resultant plot as 'supplementary points' with no impact on the results of the analysis itself (Greenacre, M. 1993; 95-102).

An iterative improvement was performed on all the data. This excluded all 'types' which occurred only once or not at all in every phase reducing the overall total of low 'Mass' variables. Appendix G lists those 'types' which were retained. In addition, the 28 phases were regrouped together according to site. The resulting bi-plot of the first two dimensions is shown in figure 7.20 below. A total inertia of 77.5% is now represented, 56.7% in the first dimension, and 20.9% in the second dimension. A further 15% is present in the un-plotted third dimension. Thus the Correspondence Analysis now accounts for a total inertia of 92.5% in the first three dimensions giving a very reliable and satisfactory result.

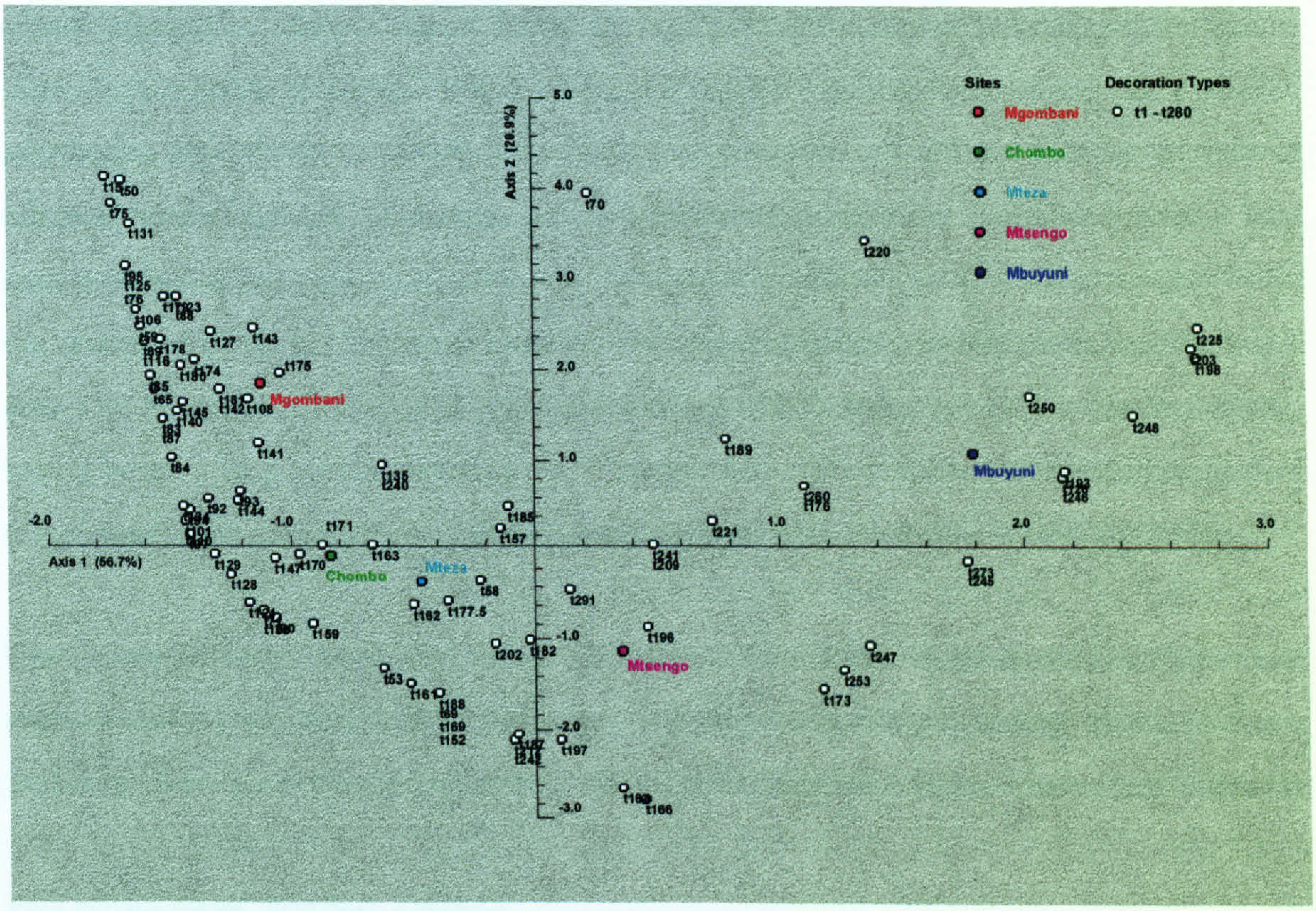

Figure 7.20 Correspondence Analysis plot of decoration types and sites (after iterative improvement)

A comparison of figure 7.20 with figure 7.17 suggests that whilst the number of 'types' represented are now seriously reduced, the overall 'shape' of the data distribution remains relatively unaltered. This can be tested by comparing the relative ordering of the remaining 'types' along the first dimension of the two Correspondence Analysis plots using a Spearman Rho correlation coefficient. A value of 0.986 is achieved, which indicates that the two bi-plots, despite iterative improvement, exhibit excellent agreement. Hence both the parabolic curve, and the relative ordering of decoration 'types' with higher 'Mass' ratings are shown to be stable, despite the low inertia of figures 7.17-7.19.

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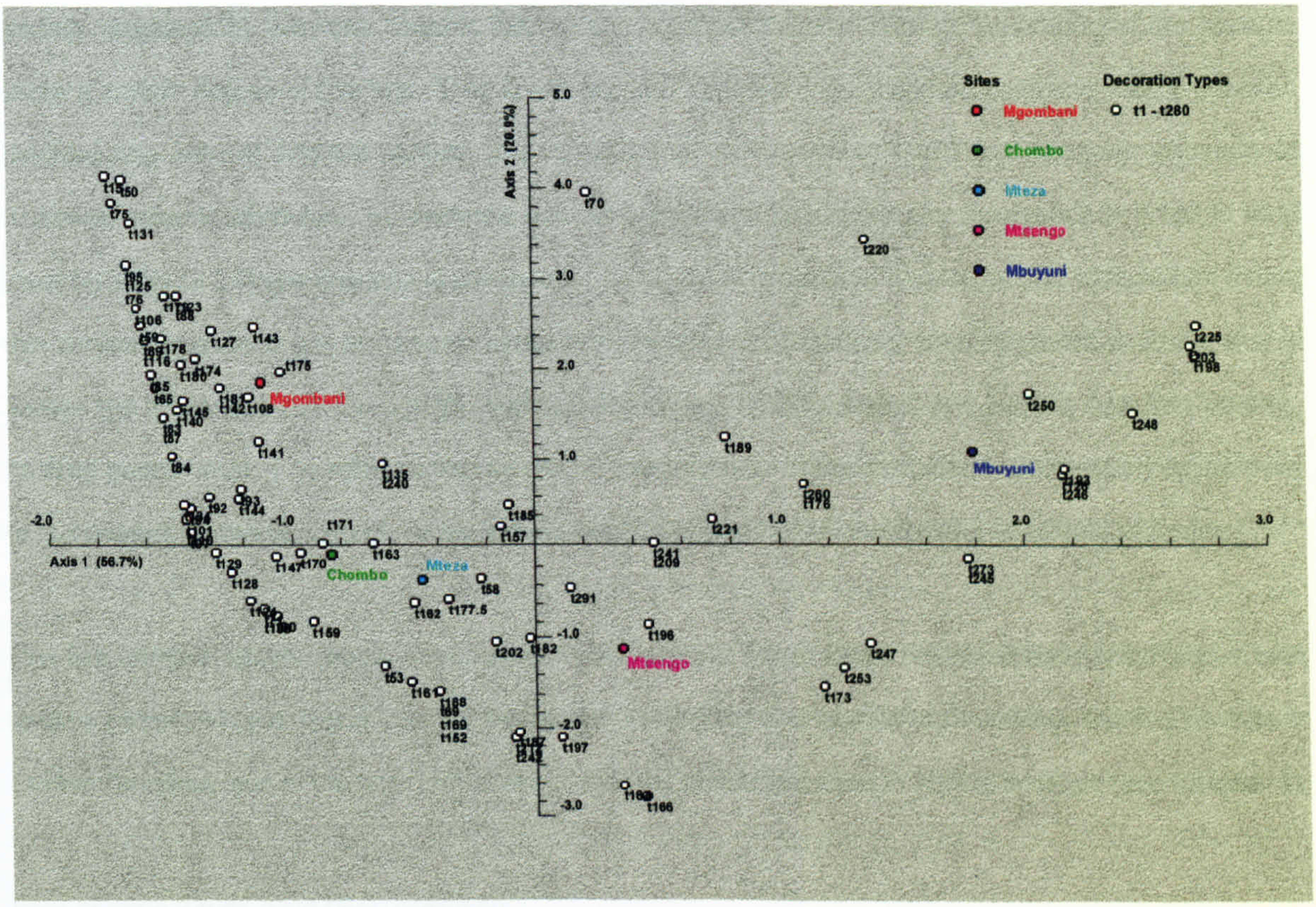

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7.8 Summary: a ceramic typology for the coastal hinterland of Kenya

The results from Correspondence Analysis produced a distribution where both the decoration 'types' and phases succeeded each other along a regular parabolic curve in an order that corresponds well with the periods proposed by previous ceramic typologies. Each of the five ceramic assemblages are seen to share a certain degree of overlap. This, it was argued, appears to be both chronological, that is between neighbouring sites of different periods, and cultural, that is, through similarity and apparent continuity of individual ceramic attributes. No evidence has yet been found to suggest any divergence or break in what must be seen as a single typological continuum. Using existing ceramic typologies and radiocarbon dates, this ceramic sequence can be broadly dated from the early iron-working, farming period onwards, that is around the 3rd century AD, through the middle iron-working, farming period, and into the later iron-working, farming period, ending perhaps as late as the 17th century AD. This conclusion has important implications to our present understanding of the settlement sequence identified in the coastal hinterland of Kenya.

The five ceramic assemblages presented here are seen to mirror those results already identified on both coastal hinterland and littoral sites of the early iron-working and middle iron-working, farming periods in central Tanzania, and of the later iron-working, farming period identified in northern Kenya (see Chapter 3).

Four general trends have been observed:

1. local fabrics appear to be restricted in their distribution to individual sites. This suggests that the production and use of ceramics was based at the local-village level

2. imported ceramics are extremely rare on coastal hinterland sites, in contrast to littoral sites

3. local ceramics reflect broad chronological trends in their attribute variability:
    - ceramics collected from the coastal hinterland and littoral sites share closely similar diagnostic attributes
    - these are seen to broadly correspond with those typological groups previously identified in central Tanzania and northern Kenya
    - the five assemblages constitute a continuous and evolving ceramic 'tradition' spanning the early first to mid-later second millennium AD
    - overall decorative variability decreases over time
    - there is a corresponding decline in the proportion of decorated sherds

- the wall-thickness of vessels decreases over time
- there is a decline in the proportion of restricted jars and a corresponding increase in the proportion of restricted bowls
- both rim forms and surface treatment exhibit general chronological trends
- this is most marked on open-bowl vessels; both restricted bowls and jars tend to have rounded rim forms with no surface treatment

4. local ceramic attributes also reflect different levels of variability at different times; change does not always correspond to the neat archaeological types that archaeologists so often want

The quote by Martin Hall cited at the beginning of this chapter is as relevant today as it was over a decade ago. We still know more about the stylistic variability of pots than we do about the people who produced and used them. Yet the need to establish ceramic typologies continues to dominate those regions where the basic settlement history is unknown or almost wholly incomplete. How can we move beyond the confines of a simple culture-historical framework, when we are still attempting to delineate the temporal and spatial limits of observed archaeological cultures? The collection of new ceramic assemblages from the coastal hinterland of Kenya was initially conceived to shed new light on the controversial issue surrounding the origins of the TT/TIW ceramic tradition. In part, this is exactly what has been achieved. However, this chapter also sought to move us one stage further, through a critical review of the assumptions that underlie the interpretation of archaeological cultures. Material culture, ethnicity and language do not necessarily correspond hand in hand with one another. Ceramic typologies which seek to transform complex and often highly varied data into bounded, monolithic and homogenous entities will never fully mirror the dynamic social reality. This analysis has sought to distance itself from assumptions embedded in traditional culture-historic approaches. In this way, it is more able to deal with the recognition and classification of the variability within material culture.

Whilst these results might be used to reinforce existing preconceptions for ceramic typological development in the coastal region of East Africa, this analysis has also gone one step further, in that it reflects the inherent fuzziness between individual attributes and sherds, and the previously defined ceramic groups or traditions. Whilst gradual differentiation between the excavated phases does suggest that the generalised trends observed in previous typologies are a diagnostic reality, it is clear that the construction of boundaries to differentiate between ceramic groups are an interpretative product of the archaeologist. Individual attributes reflect differing degrees of continuity, discontinuity and new innovations, in complex and heterogeneous patterns that cannot be represented in the traditional form of 'archaeological cultures'. Ceramics cannot simply be labelled with one-or-another cultural tradition as has previously been the case, whereby, broadly similar sherds are lumped together to form homogenous and bounded entities differentiated on the basis of key taxonomic attributes. Rather, the varied and uneven distributions reflect the heterogeneous nature of the ceramic assemblages, which themselves are only one element of a multi-faceted material culture.

Chapter 8 Patterns of Subsistence: the faunal evidence

(with Nina Mudida)

8.1 Introduction

As we have already seen, relatively little is known about past subsistence strategies of early coastal hinterland communities. A general picture of mixed agricultural communities is accepted with little concern expressed towards understanding the variation between different communities and socio-natural zones. At present there is still no clear evidence to reconstruct the evidence for cultivation of domesticated crops. However, the five excavations reported in Chapter 6 have provided a large (40,975 grams) sample of faunal remains through which some of these issues could now be explored. Preliminary examination of these materials demonstrated that the assemblages represented a varied subsistence strategy of hunting, gathering and domestic livestock herding, the proportion of which was seen to fluctuate between sites through time (Murimbika, M. 1997).

This chapter therefore reports on a more detailed faunal analysis undertaken at the Osteology department of the National Museums of Kenya by Nina Mudida, Osteology Head, with the assistance of a technician, Ezekiel Savala. Osteological reference collections were used as a basis for bone identification. Identification of the land and marine molluscs has been done by Mr. Charles Lange, a research scientist at the department of Invertebrate Zoology, National Museums of Kenya. Additional information on the distribution of fresh water species from the region was provided by Dr. Luc De Vos, head of Ichthyology department, National Museums of Kenya, while reference to Fisher and Bianchi (1984) was made for marine fish identification. Reference was also made to Kingdon (1989) concerning the past and present distributions of mammals and their species found in the archaeological assemblages. A detailed summary of the faunal materials from each excavated site, and their distribution between excavated trenches and stratigraphic contexts is summarised in Appendix H. At present, the analysis does not include data to assess the Minimum Number of Individuals (MNI) for each species represented, or the age and sex of domestic livestock. This is in part due to the fragmentary nature of the assemblages, which restricted species identification. Thus, of the 11,845 bone fragments collected, only 3,922 (33%) were identifiable.

8.2 Mgombani 02

The early to middle iron-working, farming settlement at Mgombani produced very few bone remains due to disturbance from cultivation and rubbish pit intrusion. Of the 222 (328 grams) bone fragments recovered from the 3 excavated trenches, only 64 (29%) were identifiable (see table 8.1). As such, it has been impossible to assess the relative importance of the different taxa represented. Five species of mammals were identified: *Bos taurus* (domesticated cattle), Caprini (goat/sheep), *Potamochoerus porcus* (bush pig), *Hystrix cristata* (crested porcupine), and *Cricetomys gambianus* (giant pouched rat). Also identified were one species of bird, *Gallus gallus* (domesticated chicken), and one species of land snail, *Achatina* sp. From the remains of *Achatina* shells, 22 individuals were identified. It is likely that land snails were a substantial part of the diet. Individuals of this genus are an important source of protein and are still used for food today. Traditionally, *Achatina* species are also used as a medicinal component for treating domesticated animals. In addition, their shells are known to be used for decorations and gaming-counters.

Category	Family	Species	Common Name	Habitat	Total[1]
Domestic	***Bovini***	*Bos taurus*	Cattle		9
	Caprini	*Caprini*	Sheep/Goat	All human habitats	21
	Gallus gallus	*Gallus gallus*	Chicken		4
Mammal	***Cricetidae***	*Cricetomys gambianus*	Giant pouched rat	Almost all habitats	5
	Hystricidae	*Hystrix cristata*	Crested porcupine	Hilly, rocky country; adaptable to a variety of habitats	1
	Suidae	*Potamochoerus porcus*	Bush pig	Forests, riverine habitats with thick cover, reed beds, marshes, mangrove swamps	2
Land mollusc	***Gastropoda***	*Achatina sp.*	Land snail	Disturbed forest environs; frequent human settlements	22
Unidentified fragment					158
				Grand total	**222**

Table 8.1 List of fauna from Mgombani 02

From the faunal evidence presented above, three categories of animals emerge: domesticated, hunted, and gathered (see table 8.1). Unfortunately little can be concluded from this evidence. The assemblage size and preservation do not allow any valid assessment of the community's subsistence strategy other than that they raised domesticated sheep/goat, herded some domestic cattle, and exploited a range of wild fauna from the immediate Dzitsoni and Lutsangani Upland environments.

[1] Note that the totals shown in all tables represent the Number of Identified Skeletal Parts (NISP) rather than the Minimum Number of Individuals (MNI) present.

8.3 Chombo 01

Five test pits were excavated at the middle iron-working, farming settlement at Chombo, of which the first four yielded a total of 2,340 (5,426 grams) bone remains, the bulk of which were derived from Trench Four (see Chapter 6). Of these, the species of 760 (32%) bone fragments could be identified. In contrast to Mgombani 02, a remarkable variety of taxa were evident, with a total of 56 species identified: 38 species of mammals, 6 species of land molluscs, 4 species of marine fish, 4 species of birds, 3 species of reptiles, and 1 species of marine mollusc (see table 8.2).

Of these only 4 domesticated species are present: *Bos* sp., *Capra hircus*, *Ovis aries* and *Gallus gallus*. *Bos* (cattle) is represented by just a few isolated teeth and skeletal elements at the upper and middle excavated levels and were conspicuously absent from the deepest levels, forming only 2% of the total identified assemblage. It was not possible to determine the species of *Bos* due to the lack of complete thoracic vertebrae spinal processes amongst the fauna. The finds of *Gallus gallus* (chicken) are even scarcer, forming less than 1% of the total identified assemblage. In contrast, Caprini (sheep/goat) remains are evenly represented in all the trenches and constituted just over 20% of the total identified assemblage. The remaining 77% of the identified assemblage are thus wild hunted and gathered species. This absence of domesticated species is clearly significant.

Of the hunted food species identified, *Sylvicàpra grimmia* (bush/common duiker), *Tragelaphus scriptus* (bushbuck), *Neotragus moschatus* (suni), *Potamochoerus porcus* (bush pig) and *Cricetomys gambianus* (giant pouched rat) outnumber all the other species. *Redunca redunca* (Bohor reedbuck), *Thryonomys* sp. (cane rat), and *Cercopithecus mitis* (blue monkey) come in about second in numbers while a large number of other species appear occasionally and in small numbers. This is also true for the 4 primate species: *Homo sapiens* (human) and *Papio cynocephalus* (yellow baboon) were each identified from a single bone fragment, human from Trench Two, layer 15, and baboon from a surface grid. *Colobus polycomos* (black and white colobus) and *Galago crassicaudatus* (greater galago) were also seen to be present from a small number of elements.

Carnivores were represented by three hunted species: *Felis serval* (serval cat), *Genetta tigrina* (blotched genet) and *Ichneumia albicaudata* (white-tailed mongoose).

Category	Family	Species	Common Name	Habitat	Total
Domestic	***Bovini***	*Bos taurus*	Cattle		16
	Caprini	*Caprini*	Sheep/Goat		119
		Ovis aries	Sheep	All human habitats	35
		Capra hircus	Goat		2
	Gallus gallus	*Gallus gallus*	Chicken		6
Mammal	***Alcelaphini***	*Aepyceros melampus*	Impala	Deciduous woods, bushlands, 'edge' habitats	2
		Damaliscus lunatus topi	Topi	Highly dependent on green grass	4
	Cephalophini	*Cephalophus adersi*	Ader's duiker	Forests, thickets, woodlands	2
		Cephalophus monticola	Blue duiker	Moist forests or forests with access to water	4
		Cephalophus sp.	Duiker		8
		Sylvicapra grimmia deserti	Bush/common duiker	Savannah and woodlands	105
	Cercopithecidae	*Cercopithecus mitis albogularis*	Blue monkey	Forests, woodlands	33
		Papio cynocephalus	Yellow baboon	Woodlands, forests	1
	Colobinae	*Colobus polycomos palliatus*	Black and white colobus	Coastal forests, woodland, dry thicket forests	3
	Cricetidae	*Cricetomys gambianus*	Giant pouched rat	Almost all habitats	40
	Equidae	*Equus quagga boehmi*	Common zebra	Wooded grassland	1
	Felidae	*Felis serval*	Serval cat	Grass savannahs, forests interspersed with grassy glades or moorlands	1
	Funisciuridae	*Paraxerus palliatus tanae*	Red-bellied coast squirrel	Forests and thickets	3
	Galagonidae	*Galago crassicaudatus agysymbatus*	Greater galago	Riverine forest, montane forest, thickets	4
	Giraffidae	*Giraffa camelopardalis*	Giraffe	Savannah, woodland	1
	Herpestidae	*Ichneumia albicaudata*	White-tailed mongoose	Common where there is an abundance of aardvark and pangolin burrows	3
	Hippotragini	*Oryx gazella callotis*	Fringe-eared oryx	Acacia scrub and dry thickets; seasonally arid areas	5
	Hystricidae	*Hystrix cristata*	Crested porcupine	Hilly, rocky country; adaptable to a variety of habitats	1
		Hystrix cristata	Crested porcupine	Hilly, rocky country; adaptable to a variety of habitats	5
	Leporidae	*Lepus capensis/crawshayi*	Hare	Open/arid habitats; L. crawshayi moister and more wooded savannahs	7
	Macroscelididae	*Petrodromus tetradactylus sultan*	Four-toed elephant shrew	Thickets around rocky outcrops, woodland, riverine strips and coastal forests	4
		Rhynchocyon chrysopygus	Giant elephant shrew	Forested river banks	2
	Muridae	*Rattus rattus*	Black rat	Around human settlements	3
	Neotragini	*Neotragus moschatus*	Suni	Forests, thickets	90
		Ourebia ourebi haggardi	Oribi	Moist grassy savannahs	6
	Oryceropodidae	*Orycteropus afer*	Aardvark	Dependent on abundance of termites, largely forest species	1
	Procavidae	*Dendrohyrax arboreus stulhmanni*	Tree hyrax	Gallery forest, riverine strips, montane relics	5
	Reduncini	*Redunca redunca*	Bohor reedbuck	Water dependent; flood plains, reed beds	14
	Suidae	*Potamochoerus porcus*	Bush pig	Forests, riverine habitats with thick cover, reed beds, marshes, mangrove swamps	43
	Thryonomyidae	*Thryonomys gregorianus*	Savanna cane rat	Tall grass, savannahs, moist parts of Kenya	15
		Thryonomys swinderianus	Marsh cane rat	Semi-aquatic species, living in reed beds and grass areas along rivers and lakes	3
	Tragelaphini	*Tragelaphus imberbis*	Lesser Kudu	Thicket vegetation	1
		Tragelaphus scriptus	Bushbuck	Dependent on thick cover; live in forests, mountains, shrubs	85
	Viverridae	*Genetta tigrina rubiginosa*	Blotched genet	Savannahs, woodland to gallery forest	1

Table 8.2 List of fauna from Chombo 01

Category	Family	Species	Common Name	Habitat	Total
Bird	*Phasianidae*	*Francolinus leucoscepus*	Yellow-necked spurfowl	Margins of forests, woodland, open bush country	5
		Francolinus sephaena	Crested francolin	Coastal thickets, dry bush country, along water courses	2
		Numida meleagris	Helmeted guinea fowl	Bush country, thornbush, woodlands	4
Fish (marine)	*Lethrinidae*	*Lethrinus sp.*	Emperor	Coral reefs and in-shore waters	3
	Shark	*Shark*	Shark		1
	Sparidae	*Acanthopagrus berda*	Picnic Seabream	Bottom living	4
		Argyrops sp.	Soldier bream	Shallow water; bottom living	1
Shell fish (marine)	*Bivalva*	*Anadara sp.*	Marine mollusc	Eulittoral, buried in muddy sand	1
	Cypraeidae	*Cypraea sp.*	Cowrie	Shallow sea grass beds	5
Land mollusc	*Gastropoda*	*Achatina sp.*	Land snail	Disturbed forest environs; frequent human settlements	10
	Mutelidae	*Aspatharia sp.*	Land mollusc	Aquatic species	1
	Neritina sp.	*Neritina sp.*	Land mollusc	Deep and brackish water in rivers, swamps, mangrove seas and corals	1
	Pomatiasidae	*Tropidophora sp.*	Land mollusc	Ideally terrestial snail	1
	Thiaridae	*Thiara sp.*	Land mollusc	Aquatic species	1
	Unionidae	*Caelatura sp.*	Land mollusc	Streams, lakes and other wetlands	19
Reptile	*Boidae*	*Python sebae*	Common Africa python	Moist habitats, swamps, areas along rivers and lakes	7
	Pelomedusidae	*Pelusios sp.*	Serrated terrapin	Fresh water habitats	3
	Varanidae	*Varanus sp. (exanthematicus?)*	Eastern savannah monitor	Not restricted to water courses	6
Human	*Hominidae*	*Homo Sapiens*	Man		1
Unidentified Fragment					1580
				Grand total	**2340**

Table 8.2 List of fauna from Chombo 01 (Continued)

Three hunted species of birds besides domesticated chicken (*Gallus gallus*) were identified from the assemblage: *Numida meleagris* (helmeted guineafowl), *Francolinus leucoscepus* (yellow-necked spurfowl) and *Francolinus sephaena* (crested francolin). These were determined from just a few bones.

Pelusios sp. (fresh water terrapin) and a number of fresh water molluscs were also unearthed. Shell remains of molluscs were considerable but it was not possible to determine the number of individuals they represented. Four species of marine fish were identified: *Lethrinus* sp. (emperor) from Family Lethrinidae, *Aconthopagrus berda* (picnic seabream) and *Argyrpos* sp. (soldier bream) both from Family Sparidae as well as shark. *Aconthropagrus berda* was identified from dental elements with intact tooth morphology. Although the species of shark cannot be determined from the vertebrae present, the diameter of the vertebra at 1.7 cm indicates that this individual fits into the category of medium sized sharks.

A small number of bones in the sample were burned while some had been gnawed by small rodents. Interestingly, *Rattus rattus* is the only small species of rat that were recovered from the remains. Its occurrence in the coastal hinterland has so far not been reported elsewhere, and it is generally associated with urban settlements contemporary to Chombo, on the coastal littoral (Horton, M. 1996: 386). However, the amount of gnawed bones present also indicates that there must have been a much wider range of species involved.

From the faunal evidence recovered from Chombo, it is apparent that the inhabitants used three different types of animals for their subsistence: domesticated, hunted and gathered. The species composition further indicates that these animals came from both land and sea environments. The majority of the hunted species require well-wooded areas or moist/dry forests with easy access to water; others require grass savannahs or semi-aquatic conditions. All such habitats are seen to have been locally accessible within the Kwale Upland, and neighbouring Shimba Plateau and Lutsangani Upland. However, there are a few species present that are adaptable to a wide range of habitats and a few species that live in seasonally arid areas. Remarkable in this respect is the presence of *Oryx gazella callotis* (fringe-eared oryx). This is a desert-adapted mammal, which was presumably found south of the River Tana in the Acacia scrub and dry forest of the High Coastal Plain. This assemblage also demonstrates that *Cephalophus monticola* (blue duiker) and *Tragelaphus imberbis* (lesser kudu) had a wider distribution range in the past than in the present.

From the habitats of the species exploited it can be inferred that the Chombo settlement was situated in close proximity to the forest and the edge of the wooded savannah. The River Chombo created a semi-aquatic habitat with reed beds and grassy areas along its course to sustain many animal species. In addition, access to Port Reitz Creek and the ocean provided rich grounds for fishing and gathering. The strategic location of the settlement thus enabled the community to exploit the variety of natural environs to the full.

The proportion of each species in the assemblage further indicates that the inhabitants kept a small number of domestic livestock but that this was not their main source of meat. Rather, they derived their subsistence predominantly from hunting wild animals coupled with fishing and gathering. Hunting of animals of different species, sizes and adaptations (as indicated in table 8.2) must have required a diverse range of hunting strategies ranging from the opportunistic to the more specialised, perhaps involving groups devoted to hunting and fishing, as well as the possibility of exchange through regional networks.
Much of what was needed by the inhabitants for their subsistence could clearly be derived from the animals represented - food, clothing, tools, medicine and articles for domestic use, as well as items of ritual. Traditional clothing for the ceremonies and dances was composed of colourful attire which was certainly derived from the rich fur of carnivores and monkeys, the skin of pythons, the quills of porcupines, the feathers of guinea fowl and the shells of land and marine molluscs. In conclusion, the inhabitants of

Chombo are seen to have pursued a mixed subsistence economy of specialised hunter gathering with some herding of domestic livestock.

8.4 Mteza 01

Partly contemporary to Chombo, the middle iron-working, farming settlement at Mteza was seen to have a less well-preserved faunal assemblage. The 3 excavated trenches provided a sample size of 325 bone fragments (862 grams), the bulk of which came from Trenches One and Two. Of these 141(43%) bone fragments were identifiable (see table 8.3).

The examination of the fauna revealed 25 animal species present in the assemblage, which is quite remarkable for its size. The species composition is very similar to that of Chombo. Caprini (sheep/goat) are the only significant domesticated animal, with *Bos* (cattle) identified solely from one rib fragment from the upper horizon of Trench One. Wild hunted species are clearly predominant, forming just over 86% of the assemblage.

A number of medium sized antelopes and cervids were exploited, along with other genera. Three species outnumber the rest: *Tragelaphus scriptus* (bushbuck), *Neotragus moschatus* (suni) and *Thryonomys swinderianus* (marsh cane rat). *Giraffa camelopardalis* (giraffe) is represented by a single bone fragment in Trench Three. It is not always easy to identify small fragments of bone from these large mammals. They more often than not do not have any significant features to go by due to their size. Carnivores and primates are represented by two species each: *Genetta tigrina* (blotched genet) and *Ichneumia albicaudata* (white-tailed mongoose), and *Cercopithecus mitis* (blue monkey) and *Galago crassicaudatus* (greater galago) respectively. The insectivorous *Petrodromus tetradactylus* (four-toed elephant shrew) as well as *Lepus capensis* (hare) are each represented by a single bone. Bird remains were extremely scarce at Mteza. Other than *Numida meleagris* (helmeted guinea fowl), no other bird elements could be distinguished taxonomically.

Category	Family	Species	Common Name	Habitat	Total
Domestic	*Bovini*	*Bos taurus*	Cattle		1
	Caprini	*Caprini*	Sheep/Goat	All human habitats	8
		Capra hircus	Goat		1
Mammal	*Cephalophini*	*Cephalophus harveyi*	Harvey's red duiker	Forests	2
		Sylvicapra grimmia deserti	Bush/common duiker	Savannah and woodlands	4
	Cercopithecidae	*Cercopithecus mitis albogularis*	Blue monkey	Forests, woodlands	2
	Galagonidae	*Galago crassicaudatus agysymbatus*	Greater galago	Riverine forest, montane forest, thickets	2
	Giraffidae	*Giraffa camelopardalis*	Giraffe	Savannah, woodland	1
	Herpestidae	*Ichneumia albicaudata*	White-tailed mongoose	Common where there is an abundance of aardvark and pangolin burrows	1
	Hystricidae	*Hystrix cristata*	Crested porcupine	Hilly, rocky country; adaptable to a variety of habitats	1
	Leporidae	*Lepus capensis/crawshayi*	Hare	Open/arid habitats; L. crawshayi moister and more wooded savannahs	1
	Macroscelididae	*Petrodromus tetradactylus sultan*	Four-toed elephant shrew	Thickets around rocky outcrops, woodland, riverine strips and coastal forests	1
	Neotragini	*Neotragus moschatus*	Suni	Forests, thickets	14
	Thryonomyidae	*Thryonomys swinderianus*	Marsh cane rat	Semi-aquatic species, living in reed beds and grass areas along rivers and lakes	9
	Tragelaphini	*Tragelaphus scriptus*	Bushbuck	Dependent on thick cover; live in forests, mountains, shrubs	15
	Viverridae	*Genetta tigrina rubiginosa*	Blotched genet	Savannahs, woodland to gallery forest	2
Bird	*Phasianidae*	*Numida meleagris*	Helmeted guinea fowl	Bush country, thornbush, woodlands	2
Fish (fresh-water)	*Clariidae*	*Clarias gariepinus*	Mudfish	Fresh water	4
Shell fish (marine)	*Bivalva*	*Anadara sp.*	Marine mollusc	Eulittoral, buried in muddy sand	1
Land mollusc	*Gastropoda*	*Achatina sp.*	Land snail	Disturbed forest environs; frequent human settlements	2
	Mutelidae	*Aspatharia sp.*	Land mollusc	Aquatic species	2
	Neritina sp.	*Neritina sp.*	Land mollusc	Tropical and subtropical deep and brackish water in rivers, swamps, mangrove seas and corals	4
	Thiaridae	*Thiara sp.*	Land mollusc	Aquatic species	2
	Unionidae	*Caelatura sp.*	Land mollusc	Streams, lakes and other wetlands	52
Reptile	*Bitis genera*	*Bitis arietans*	Puff adder	All habitats except rain forests and deserts	4
	Testudinidae	*Kinixys belliana*	Eastern hinged tortoise	Coastal lowlands, highveld savannah	1
	Varanidae	*Varanus niloticus*	Nile monitor lizard	Permanent river banks and dams	2
Unidentified fragment					184
				Grand total	325

Table 8.3 List of fauna from Mteza 01

It is worthwhile to note that there are four new species at Mteza not seen at Chombo in spite of the assemblages' small size. Three of these species are reptiles: *Varanus sp.* was identified on the basis of size. Both *Varanus niloticus* (Nile monitor lizard) and *Varanus exanthematicus* (Eastern savanna monitor) occur in the same habitats and are found on the Kenya coast. *Varanus niloticus* is, however, a larger species. *Kinixys belliana* (Eastern hinged tortoise) was identified from the shell pattern. *Bitis arietans* (puff adder) and *Clarias gariepinus* (mud-fish) were identified on the basis of vertebral morphology and details of the skull respectively. The fish, *Clarias gariepinus* is the most significant because it represents the first fresh water fish genera discovered. It has an almost pan-African distribution and specimens are well known from coastal fresh water bodies.

In contrast, five species of molluscs were found at Mteza. The largest sample was collected from Trench Three, and was dominated by a large number of fresh water mollusc remains, mainly of *Caelatura* species, most probably collected from the nearby River Cha Simba (Pemba). Only one species comes from marine taxa – *Andara* sp. and presumably was collected from the muddy sands of Port Reitz creek.

From the faunal evidence, it may be concluded that the Mteza community shared and exploited the same habitat as that of the neighbouring settlement at Chombo, with communities primarily utilising the Lutsangani and Kwale Uplands. In the same way, they appear to have been primarily dependant upon hunting and gathering for their main subsistence, supported through the keeping of domestic livestock, primarily sheep/goat. Despite their proximity to the Low Coastal Plain, it seems that they were more inclined to exploit land and fresh water than marine environs. However, this cannot be conclusive since the excavation demonstrated that much of the food remains were probably disposed of by throwing off the ridge slope where they were exposed to wild animals and other elements of deterioration.

8.5 Mtsengo 01

The middle to later iron-working, farming site at Mtsengo was seen to have been a large multi-component settlement with some evidence for specialist craft production. It was also seen to be situated in a significant location on the drier Mariakani soils of the western Kaloleni Upland, where the covering vegetation of *Brachystegia-Afzelia* (lowland woodland) contrasted dramatically to the moist lowland rain forest to the east. The 3 trenches excavated provided a large and well-preserved sample of faunal materials. The total assemblage numbers 6,413 bone fragments (21,526 grams) and therefore accounts for 54% of the total fauna recovered from all 5 archaeological sites examined. Of this, 1,908 (30%) bone fragments formed identifiable taxa, with a total of 49 species represented (see table 8.4).

Category	Family	Species	Common Name	Habitat	Total
Domestic	**Bovini**	*Bos taurus*	Cattle		906
	Caprini	*Caprini*	Sheep/Goat		296
		Ovis aries	Sheep	All human habitats	41
		Capra hircus	Goat		92
	Gallus gallus	*Gallus gallus*	Chicken		38
Mammal	**Bovidae**	*Syncerus caffer*	African buffalo	Forest, grassy glades	1
	Cephalophini	*Cephalophus adersi*	Ader's duiker	Forests, thickets, woodlands	14
		Cephalophus harveyi	Harvey's red duiker	Forests	4
		Cephalophus monticola	Blue duiker	Moist forests or forests with access to water	15
		Sylvicapra grimmia deserti	Bush/common duiker	Savannah and woodlands	53
	Cercopithecidae	*Cercopithecus mitis albogularis*	Blue monkey	Forests, woodlands	17
	Cricetidae	*Cricetomys gambianus*	Giant pouched rat	Almost all habitats	36
	Felidae	*Felis serval*	Serval cat	Grass savannahs, forests interspersed with grassy glades or moorlands	1
		Panthera pardus	Leopard	Forests, woodlands	4
	Herpestidae	*Herpestes ichneumon*	Egyptian mongoose	Savannah	2
		Herpestes sanguineus	Slender mongoose	Wooded to forest areas	5
		Ichneumia albicaudata	White-tailed mongoose	Common where there is an abundance of aardvark and pangolin burrows	2
		Mungos mungo	Banded mongoose	Savannah, gallery forest, woodland	2
	Leporidae	*Lepus capensis/crawshayi*	Hare	Open/arid habitats; L. crawshayi moister and more wooded savannahs	3
	Macroscelididae	*Petrodromus tetradactylus sultan*	Four-toed elephant shrew	Thickets around rocky outcrops, woodland, riverine strips and coastal forests	13
		Rhynchocyon chrysopygus	Giant elephant shrew	Forested river banks	3
	Muridae	*Rattus rattus*	Black rat	Around human settlements	2
	Neotragini	*Madoqua guentheri*	Dik-dik	Arid adapted	3
		Neotragus moschatus	Suni	Forests, thickets	160
		Ourebia ourebi haggardi	Oribi	Moist grassy savannahs	3
	Procavidae	*Dendrohyrax arboreus stulhmanni*	Tree hyrax	Gallery forest, riverine strips, montane relics	3
	Reduncini	*Redunca redunca*	Bohor reedbuck	Water dependent; flood plains, reed beds	1
	Sciuridae	*Heliosciurus rufobrachium undulatus*	Red-legged sun squirrel	Forests, wooded areas	2
	Suidae	*Potamochoerus porcus*	Bush pig	Forests, riverine habitats with thick cover, reed beds, marshes, mangrove swamps	16
	Thryonomyidae	*Thryonomys gregorianus*	Savanna cane rat	Tall grass, savannahs, moist parts of Kenya	7
		Thryonomys swinderianus	Marsh cane rat	Semi-aquatic species, living in reed beds and grass areas along rivers and lakes	12
	Tragelaphini	*Tragelaphus scriptus*	Bushbuck	Dependent on thick cover; live in forests, mountains, shrubs	9
	Viverridae	*Genetta tigrina rubiginosa*	Blotched genet	Savannahs, woodland to gallery forest	2
		Vivera civetta	African civet	Wherever there is cover	2

Table 8.4 List of fauna from Mtsengo 01

Category	Family	Species	Common Name	Habitat	Total
Bird	*Coculidae*	*Centropus superciliosus*	White-browed coucal	Coastal scrub, grassy bush country	1
	Phasianidae	*Francolinus leucoscepus*	Yellow-necked spurfowl	Margins of forests, woodland, open bush country	10
		Numida meleagris	Helmeted guinea fowl	Bush country, thornbush, woodlands	43
	Strigidae	*Bubo lacteus*	Verreaux's eagle owl	Woodlands, savannah and bush country	1
Fish (marine)	*Acanthuridae*	*Acanthurus sp.*	Surgeon fish	Coral reefs	1
	Carangidae	*Alectis indicus*	Indian thread fish	Reefs	1
		Carangoides sp.	Trevally	Rocky and coral reef areas	2
	Haemulidae	*Plectorhinchus schotaf*	Minstrel sweetlip	Reefs	5
	Labridae	*Labrid sp.*	Wrasse	Shallow depths	2
	Lethrinidae	*Lethrinus sp.*	Emperor	Coral reefs and in-shore waters	38
	Scaridae	*Scarus sp.*	Parrot fish	Coral reefs, shallow water	1
	Serranidae	*Epinephelus sp.*	Rock cod	Coral reefs, shallow waters	3
	Siganidae	*Siganus sutor*	Rabbit fish	Reefs, weedy flats	13
Shell fish (marine)	*Cypraeidae*	*Cypraea sp.*	Cowrie	Shallow sea grass beds	14
	Neritidae	*Nerita sp.*	Marine mollusc	On rocks in the littoral fringe	1
Land mollusc	*Gastropoda*	*Achatina sp.*	Land snail	Disturbed forest environs; frequent human settlements	2
Unidentified fragment					4505
				Grand total	**6413**

Table 8.4 List of fauna from Mtsengo 01 (continued)

The fauna from Mtsengo demonstrates a great diversity in species composition, including 4 species of domesticates and 45 species of hunted animals, fish and molluscs. In addition, 18 new species to those determined at the other sites investigated were identified.

Looking at the general species composition at Mtsengo, it becomes evident that the inhabitants of this site were exploiting both domestic and wild species. Domestic *Bos* (cattle) *Capra* (goat) and *Ovis* (sheep) remains are considerable throughout the occupation levels and are represented by a wide range of skeletal elements from the skull to the distal limbs. This indicates that the slaughter of these animals took place within the site. Both adult and sub-adult animals were killed. Very young animals (less than 1 year) were also identified from deciduous dentition, but they only appear in small proportions. From the total quantities of domesticates recovered at Mtsengo it can be concluded that both played an important role in the economy of the occupants. However domestic cattle were predominant, constituting 48% of the total assemblage, while domestic sheep/goat formed 23%. There was no significant variation in this proportion over time.

Examined for taphonomy, the bones revealed marks left by rodents (*Rattus rattus*) and carnivores on their surfaces as well as marks left by sharp instruments to reveal butchery practices. Of special interest is an artifact found amongst the bones in Trench Two (48) made out of a complete *Capra hircus* (goat) metacarpal with a hole 0.67 cm in diameter near the proximal end. It was probably used as a pendant or talisman.

The hunted bovids are represented by 10 species. Of these, *Syncerus caffer* (African buffalo) was identified from a single upper P4 molar of a sub-adult from Trench One (29); it is not clear why more skeletal elements were not found to corroborate this find; and *Madoqua guentheri* (dik-dik) was identified from 3 different bone fragments that came from Trenches One (29) and Three (17). Unlike other genera identified here, *Madoqua guentheri* lives in an arid habitat. A rare occurrence of this species may be an indication that some isolated animals sometimes wandered across their distribution boundaries.

Neotragus moschatus (suni) outnumber all the other bovids; *Sylvicapra grimmia* (bush/common duiker) is second but far behind in actual numbers. The *Cephalophus* species (*C. harveyi*, *C. adersi* and *C. monticola*) appear in small but consistent quantities. Other animals represented are *Potamochoerus porcus* (bush pig), *Cricetomys gambianus* (giant pouched rat) and *Thryonomys swinderianus* (marsh cane rat). Their numbers indicate that these mammals were an important source of food for the inhabitants.

The diversity of carnivores at this site is also interesting. The increase in the occurrence of Herpestids to four species from one at the other sites is an indication of an environment conducive to their existence. *Panthera pardus* (leopard) was identified from three skeletal elements – femur, forefoot phalange and upper canine. The presence of leopard in the assemblage is remarkable in itself, but the find of a pendant made out of the leopard canine in Trench Three (02) is even more notable. The tip of the canine is worn out and it has a hole drilled at its root. The wear of the tip of the canine can be interpreted in two ways; either it belonged to an individual of advanced age or it might have been used for a long period of time. The first interpretation is more realistic taking into account the durability of the canine material. One thing is clear: the inhabitants were not limited to hunting small mammals but could obtain precious skins and other articles of interest from highly dangerous species.

Examination of a considerable amount of fish remains revealed 9 species of marine genera exploited. All of them are found at or within the vicinity of coral reefs and have good to excellent flesh. Only one species of marine mollusc, *Nerita* sp. was found; these animals live on the rocks in the littoral fringe. One other mollusc that was found is *Acatina* sp., the largest land mollusc, which is only represented by a few individuals.

There is a conspicuous absence of any reptiles or fresh water fish in the assemblage. However, a few skull elements of fish were unable to be determined taxonomically and there is a possibility that these elements are from fresh water fish.

Four species of bird were identified. *Bubo lacteus* (Verreaux's eagle owl) was identified from a single ulna in Trench One (46). This is the largest African owl, and in many cultures is a bird of bad omen, killed whenever possible. *Centropus superciliosus* (white-browed coucal) is a middle-sized bird likely killed for food. More common were *Francolinus leucoscepus* (yellow-necked spur fowl) and *Numida meleagris* (helmeted guinea fowl) which outnumber the observed specimens of domestic chicken.

From the available evidence it is apparent that the Mtsengo community practised a mixed subsistence economy that exploited both domesticated, and hunted and gathered fauna. Of greatest significance however, is the shift in the proportion of domesticated species compared to earlier settlements at Mgombani, Chombo and Mteza, with a considerable increase in dependency on cattle herding. Despite wild fauna making up only 28% of the identified assemblage, the variety of species evident still illustrates that hunting and gathering formed a skilled and important subsistence strategy. From the wild species composition and their associated habitats it may be concluded that the Mtsengo settlement was situated in a wooded environment with savannah patches present nearby. This provided a great variety of animals for daily subsistence. The inhabitants also had access to rich marine resources. This was surprising considering that access to the coastal littoral is at least 30kms distance away, and it would appear probable that these marine products were obtained through local exchange networks with littoral communities.

8.6 Mbuyuni 01

The later iron-working, farming, settlement at Mbuyuni produced 2,545 bone fragments with a total weight of 12,773 grams. These materials were concentrated in Trenches One and Three. Of these, 1,049 (41%) specimens were attributed to 55 different taxa (see table 8.5). Of these, there are 15 new species identified from the Mbuyuni assemblage that were not seen on the other sites: 6 mammals; 2 birds; 1 reptile; 3 fish (2 fresh water and 1 marine); 2 molluscs (1 terrestrial and 1 marine); and 1 marine crab.

From a close examination of the fauna at Mbuyuni, a very interesting picture emerges. The numbers of domesticates are stable throughout the occupation levels. Proportions of *Bos* (cattle) are considerably higher than Caprini (sheep/goat), with cattle forming 66% of the total identified assemblage and sheep/goat forming only 8%. This would indicate that the earlier preference for sheep/goat was clearly superseded by a far greater interest in cattle. Like Mtsengo, the site of Mbuyuni, situated in the dry Rabai Upland, is west of the moister forested hills of the Kaloleni and Dzitsoni Uplands on less agriculturally suitable Bay sediments.

Amongst the domestic cattle remains, a single specimen of *Bos indicus* (Zebu) is detected in Trench One (19) from one thoracic vertebrae spinal process which has a forked distal end. An absence of this evidence in the fauna has so far hindered the determination of cattle breed. Unfortunately, it is difficult to conclude whether other breeds were also exploited. Animals of different age groups were slaughtered, with adult and sub-adult most common. Some elements are partially burned and have been gnawed by rodents, which once again must have included *Rattus rattus* (black rat).

This site produced the first and only fragment of *Canis familiaris* (domestic dog), which was identified from a lower canine belonging to a sub-adult. In spite of the fact that it came from the surface grid, which represents a late occupation, this find is significant. The remains of *Gallus gallus* (domestic chicken) are relatively scarce, as they are in all the other sites.

A few skeletal elements of human aged between 3-4 years were recovered from Trench One (layers 02 and 11) and are probably associated with the recorded burial (grave fill 07). The age of this individual was determined from a fully erupted 2^{nd} milk molar, which did not show any wearing of the crown. This is supported by a few long bones that also correlated to an age of 3-4 years. A mature human was also represented by an ulna shaft in Trench One (17).

Category	Family	Species	Common Name	Habitat	Total
Domestic	*Bovini*	*Bos indicus*	Zebu		1
		Bos taurus	Cattle		485
	Canidae	*Canis familiaris*	Dog		1
	Caprini	*Caprini*	Sheep/Goat	All human habitats	37
		Ovis aries	Sheep		8
		Capra hircus	Goat		47
	Gallus gallus	*Gallus gallus*	Chicken		16
Mammal	*Accipitridae*	*Terathopius ecaudatus*	Bateleur	Open and semi-desert country	1
	Alcelaphini	*Alcelaphus buselaphus*	Kongoni	Savannah, grassland, woodland	33
	Cephalophini	*Cephalophus adersi*	Ader's duiker	Forests, thickets, woodlands	1
		Cephalophus monticola	Blue duiker	Moist forests or forests with access to water	10
		Sylvicapra grimmia deserti	Bush/common duiker	Savannah and woodlands	67
	Cercopithecidae	*Cercopithecus aethiops*	Vervet monkey	Throughout savannah areas	2
		Cercopithecus mitis albogularis	Blue monkey	Forests, woodlands	18
		Papio cynocephalus	Yellow baboon	Woodlands, forests	2
	Colobinae	*Colobus polycomos palliatus*	Black and white colobus	Coastal forests, woodland, dry thicket forests	5
	Cricetidae	*Cricetomys gambianus*	Giant pouched rat	Almost all habitats	23
	Equidae	*Equus quagga boehmi*	Common zebra	Wooded grassland	22
	Galagonidae	*Galago crassicaudatus agysymbatus*	Greater galago	Riverine forest, montane forest, thickets	2
	Gerbillinae	*Tatera robusta*	Tatera	Sandy soils; open, well drained areas	1
	Giraffidae	*Giraffa camelopardalis*	Giraffe	Savannah, woodland	2
	Herpestidae	*Herpestes ichneumon*	Egyptian mongoose	Savannah	1
		Herpestes sanguineus	Slender mongoose	Wooded to forest areas	1
		Ichneumia albicaudata	White-tailed mongoose	Common where there is an abundance of aardvark and pangolin burrows	7
	Hippopotamidae	*Hippopotamus amphibius*	Hippo	Rivers	1
	Hystricidae	*Hystrix cristata*	Crested porcupine	Hilly, rocky country; adaptable to a variety of habitats	8
	Macroscelididae	*Petrodromus tetradactylus sultan*	Four-toed elephant shrew	Thickets around rocky outcrops, woodland, riverine strips and coastal forests	3
		Rhynchocyon chrysopygus	Giant elephant shrew	Forested river banks	1
	Muridae	*Rattus rattus*	Black rat	Around human settlements	3
	Neotragini	*Neotragus moschatus*	Suni	Forests, thickets	25
		Ourebia ourebi haggardi	Oribi	Moist grassy savannahs	7
	Procavidae	*Dendrohyrax arboreus stulhmanni*	Tree hyrax	Gallery forest, riverine strips, montane relics	1
	Reduncini	*Redunca redunca*	Bohor reedbuck	Water dependent; flood plains, reed beds	26
	Suidae	*Phacochoerus aethiopicus*	Warthog	Savannah, grassland, open woodland	14
		Potamochoerus porcus	Bush pig	Forests, riverine habitats with thick cover, reed beds, marshes, mangrove swamps	20
	Thryonomyidae	*Thryonomys gregorianus*	Savanna cane rat	Tall grass, savannahs, moist parts of Kenya	11
	Tragelaphini	*Tragelaphus imberbis*	Lesser Kudu	Thicket vegetation	1
		Tragelaphus scriptus	Bushbuck	Dependent on thick cover; live in forests, mountains, shrubs	47
	Viverridae	*Genetta tigrina rubiginosa*	Blotched genet	Savannahs, woodland to gallery forest	1
Bird	*Columbiformes*	*Columba guinea*	Speckled pigeon	Open country, acacia woodland, cliffs	1
	Phasianidae	*Francolinus leucoscepus*	Yellow-necked spurfowl	Margins of forests, woodland, open bush country	12
		Numida meleagris	Helmeted guinea fowl	Bush country, thornbush, woodlands	12

Table 8.5 List of fauna from Mbuyuni 01

Category	Family	Species	Common Name	Habitat	Total
Fish (fresh-water)	*Cichlidae*	*Oreochromis spillurus*	Tilapia	Fresh water	3
	Clariidae	*Clarias gariepinus*	Mudfish	Fresh water	7
	Syodontidae	*Synodontis zanzibaricus*	East coast squeaker	Fresh water	2
Fish (marine)	*Haemulidae*	*Plectorhinchus schotaf*	Minstrel sweetlip	Reefs	1
	Scaridae	*Scarus rubroviolaceus*	Ember Parrot fish	Coral reefs, shallow water	1
	Serranidae	*Epinephelus sp.*	Rock cod	Coral reefs, shallow waters	2
Shell fish (marine)	*Cypraeidae*	*Cypraea sp.*	Cowrie	Shallow sea grass beds	2
	Portunidae	*Scylla serrata*	Mangrove (mud) crab	Shallow coastal waters	24
Land mollusc	*Gastropoda*	*Achatina sp.*	Land snail	Disturbed forest environs; frequent human settlements	3
	Mutelidae	*Aspatharia sp.*	Land mollusc	Aquatic species	4
	Subulinidae	*Pseudoglessula sp.*	Land mollusc	Terrestial forests, shrubs,woodlands	3
Reptile	*Bitis genera*	*Bitis arietans*	Puff adder	All habitats except rain forests and deserts	1
	Pelomedusidae	*Pelusios sp.*	Serrated terrapin	Fresh water habitats	1
	Testudinidae	*Testudo sp.*	Leopard tortoise	Coastal plain, bushveld	1
Human	*Hominidae*	*Homo Sapiens*	Man		7
Unidentified fragment					1496
				Grand total	**2545**

Table 8.5 List of fauna from Mbuyuni 01 (continued)

The continued exploitation of a wide range of wild species is well documented at Mbuyuni. Larger bovids were hunted, as well as smaller ones. *Alcelaphus buselaphus* (kongoni) and *Equus quagga* (common zebra) remains are found in most of the occupation levels. *Sylvicapra grimmia* (bush duiker) numbers remain consistent, and they are indisputably the highest amongst the remains. *Redunca redunca* (Bohor reedbuck) is more common in the upper layers compared with *Tragelaphus scriptus* (bushbuck); this trend is reversed in the deeper layers with *Tragelaphus scriptus* becoming more common. There is also an increase in *Cephalophus monticola* (blue duiker) and a drastic decrease in *Neotragus moschatus* (suni). Numbers of *Cricetomys gambianus* (giant pouched rat) and *Thryonomys gregoreanus* (savannah cane rat) indicate that they were a common food resource. Another suid species appears here – *Phacochoerus aethiopicus* (warthog). This species derives from a smaller number of elements than *Potamochoerus porcus* (bush pig), but its presence here is equally important. *Phacochoerus aethiopicus* and *Alcelaphus buselaphus* are adapted to the same habitats of savannah grassland and open woodlands. Their distribution boundaries have been seriously diminished over time and they, along with *Tragelaphus imberbis* (lesser kudu), are no longer found within the area of Mbuyuni.

The faunal remains show further diversification in fresh water animals. The presence of *Oreochromis spillurus* (tilapia) and *Synodontis zanzibaricus* (East coast squeaker) in the middle levels of the occupation is quite important in confirming their early exploitation. Of the fresh water fish, *Clarias gariepinus* (mud-fish) are dominant. One other species of fish is present but not yet identified. In contrast to Mtsengo, marine fish are seen to form a smaller part of the overall fish diet at Mbuyuni. Species identified included

Plectorinchus schotaf (minstrel sweetslip), *Scarus rubroviolaceus* (ember parrot fish) and *Epinephelus sp.* (rock cod).

The remains of large numbers of *Scylla serrata* (mangrove crab) are important as well. The occupants of the other sites, for unknown reasons, did not exploit them. This species, besides inhabiting the shallow coastal waters, can also be found in the mangrove forests of the coastal littoral where they moult and mate, and is still an important commercial species today.

From the faunal evidence available is may be concluded that the inhabitants of Mbuyuni practised a mixed economy with a stronger inclination towards animal husbandry. Keeping cattle becomes a major occupation that is clearly dominant over hunting, fishing and gathering activities. So, along with domesticates, land and sea natural resources continue to be exploited. A heavier dependence on domestic livestock is a clear indication of a more advanced technology whereby the inhabitants were able to modify their dependence on nature and began to practice a more planned subsistence economy.

8.7 Conclusion: emerging evidence for subsistence variability

Interesting conclusions can be made when the faunal evidence from these five coastal hinterland sites of Kenya is compared. As was seen in Chapter 4, the traditional culture-historic distinction between artificially bounded and homogenised cultural divisions should be replaced with a new perspective which seeks to explore the heterogeneous reality of non-bounded and interrelated groups. The five assemblages are seen to reflect this variance both spatially, in response to their local socio-natural environments, and temporally, through the emerging development of iron-working, farming communities.

This is well illustrated by grouping the observed taxa into general categories that illustrate the main division between faunal resources (see table 8.6). A proportional representation of this variance between sites is shown in figure 8.1.

Category	Mgombani 02	Chombo 01	Mteza 01	Mtsengo 01	Mbuyuni 01	Total
Bird		11	2	55	25	93
Fish (fresh-water)			4		12	16
Fish (marine)		9		66	4	79
Shell fish (marine)		6	1	15	26	48
Land mollusc	22	33	62	2	10	129
Domestic chicken	4	6		38	16	64
Domestic sheep/goat	21	156	9	429	92	707
Domestic cattle	9	16	1	906	486	1418
Mammal (small)	6	133	17	109	89	354
Mammal (medium)	2	358	35	278	219	892
Mammal (large)		13	1	1	58	73
Grand Total	**64**	**741**	**132**	**1899**	**1037**	**3873**

Table 8.6 Number of identified bone fragments for each of the main faunal categories by site

As can be seen, the early to middle iron-working, farming site of Mgombani, although restricted by its sample size, is characterised by an equal dependency on wild and gathered fauna and domesticated livestock, principally sheep/goat. This is better represented at the sites of Chombo and Mteza, where the better preservation of faunal materials would suggest that hunted and gathered subsistence strategies were predominant. Emphasis was therefore placed on the varied habitats locally accessible within which the varied taxa could be obtained.

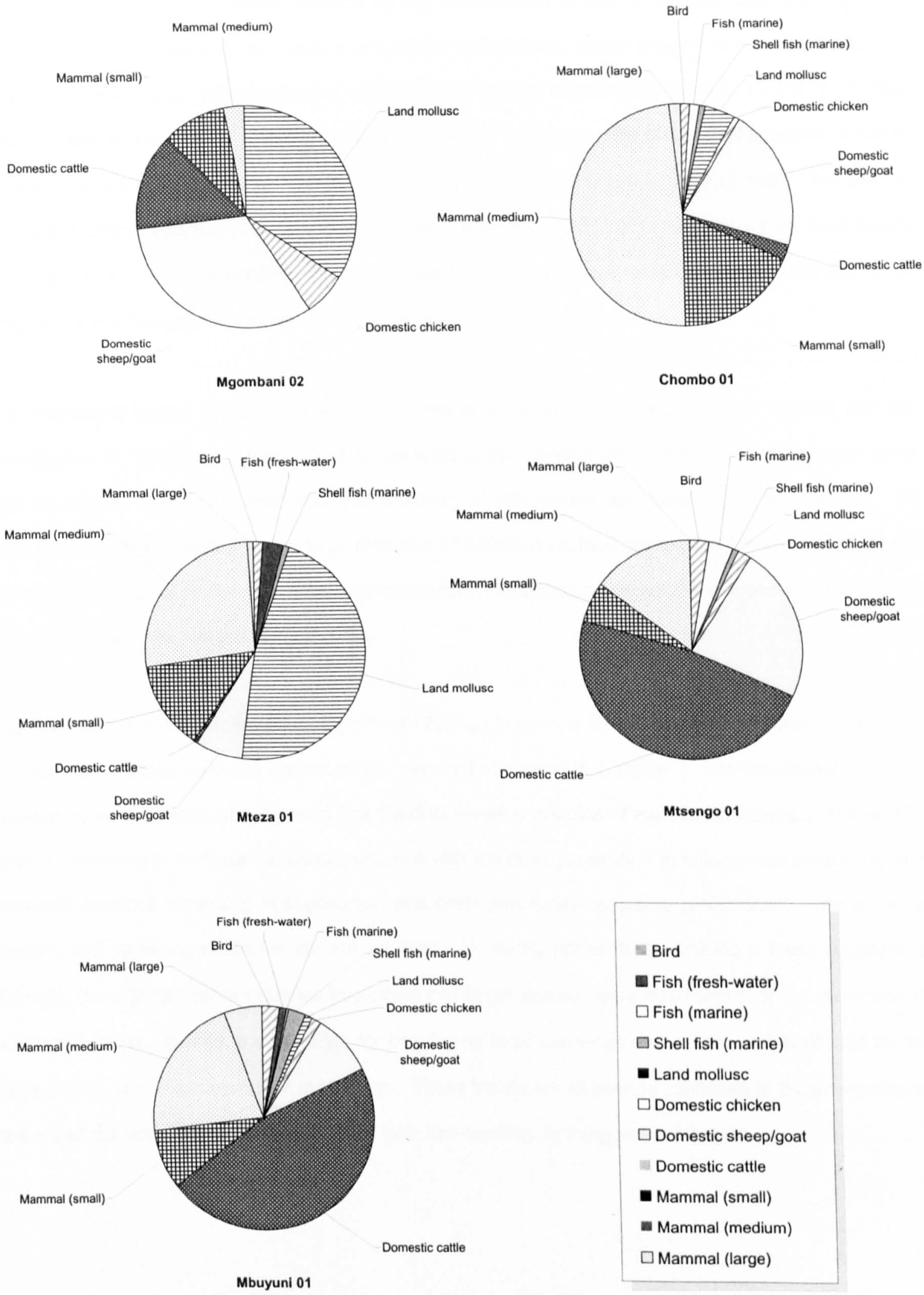

Figure 8.1 Proportional representation of the main faunal categories by site

The relative rarity of domestic livestock, notably that of cattle within these 3 sites is noteworthy, and in combination with the considerable evidence for the consumption of marine fish and shell fish, and fresh water fish by the inhabitants of Chombo and Mteza respectively, would provide further justification for arguments against a so-called pastoralist origin for early coastal communities (Horton, M. and N. Mudida, 1993; Horton, M. 1996: 393). There is no data available for an assessment of the early presence of tsetse fly in this region, but it is possible that its presence contributed to this low number of cattle. Indeed, the littoral and coastal uplands of the immediate coastal hinterland would not have provided an environment favourable to the intensive herding of cattle. Instead, sheep/goat were raised, though in relatively small proportions to the largely hunted and gathered meat diet.

The impressive variety of hunted mammals of mainly small to medium sizes would suggest that the communities of Mgombani, Chombo and Mteza were skilled hunters and gatherers. It would thus seem that the coastal hinterland region provided a variety of rich natural and human modified habitats. Of particular note in this context, is the large presence of *Achatina sp.* land molluscs at Mgombani and Mteza which are suggestive of disturbed forest environments and perhaps represent the encroachment of human activity into the forest margins for cultivation.

The middle to later iron-working, farming site of Mtsengo is seen to mark a shift in the relative importance of domestic livestock to these communities. As we have seen in Chapter 5, this transitional period is marked by an expansion of settlement into the drier western margins of the coastal uplands. The shift in spatial patterning is thus seen to correspond well with the changes evident in subsistence production with domestic livestock increasing in importance, and cattle eventually becoming predominant. The previous hunting and gathering strategies are still retained. However, rather than providing a basic subsistence function, there is also some evidence to suggest that larger species were also hunted for the production of exchange goods. Indeed, the evidence for developing local exchange networks is well illustrated by the large presence of marine produce at Mtsengo. These trends are all seen to contribute to the emergence of the mixed domestic economy evident at the later iron-working, farming site of Mbuyuni.

A clear development through time would thus appear to be evident, from a mainly hunter-gatherer economy at Mgombani, Chombo and Mteza through to the emergence of the balanced mixed domestic economies evident at Mtsengo and Mbuyuni. However, this chronological pattern is still only provisional. Greater emphasis needs to be placed on the local environmental context of each site, and further evidence for the human modification to the natural landscape must be obtained. The large number of wild hunted species provides good evidence for the rich and productive environment of the early coastal region. Examining the fauna from these sites has thus enabled the possibility of going back in time to reconstruct the past distribution boundaries of these species. Similarly, further comparative assessment of contemporary settlements is required. For example, settlement contemporary to Mtsengo should be evaluated in the more fertile and agriculturally productive Dzitsoni and eastern Kaloleni uplands. This would then enable us to assess whether the increasing dependence on domestic livestock and particularly cattle was uniformly adopted at the same time, or whether it was a response to the adaptation of the subsistence economy to the drier socio-natural regions in the north and west.

In summary, it can be said that we have now established a much clearer picture of the changing diet and economy of the central and southern coast region of Kenya. From the knowledge of the habitats of the species which were exploited by these people, we have also reinforced our understanding of the natural and human modified environments surrounding these settlements. Finally, this chapter has clearly demonstrated that by resolving many of the previously unexplored questions from the faunal evidence, a more realistic understanding about the development of iron-working, farming communities in the coastal regions of East Africa can be advanced.

Stage 3 Conclusions:

Towards a reflexive multi-interpretative framework

Chapter 9 Conflicting Histories: (re)evaluating data coherence

'Researchers need to demonstrate a willingness to create hypothesis from the most logical, economical explanations suggested by the available evidence and do away with the gratuitous guesswork that has plagued the field for a long time... Therefore, scholars must exhibit greater skepticism about prevailing models and be prepared to abandon old thinking habits as new information surfaces' (Pouwels, R. 1999: 296)

9.1 Introduction

This thesis has set out to collect new archaeological data on the iron-working, farming communities within the central and southern coastal hinterland of Kenya. In doing so, it has sought to provide a regional perspective within which previously generalised statements about East African coastal history could be evaluated. Through a hermeneutic epistemology, the thesis structure has sought to encourage a reflexive awareness in understanding how our interpretations have been constructed. In Stage 1, the identification of preconceived assumptions, which are seen to underlie the interpretation of previous research, was made. This has allowed both the dominant and alternative histories to be critically evaluated. In Chapter 2, a review of Mijikenda historiography illustrated a general dissonance between local oral traditions, historical texts and linguistic evidence. The rapid and *en masse* population movement by early proto-Sabaki speakers to a northern Shungwaya homeland, the later 16^{th} century AD southwards migration of the proto-Mijikenda peoples, and the notion of their static centralised Kaya occupation were all questioned. The resulting review allowed us to recognise two equally plausible, but alternative scenarios to the long established 'standard' East African coastal history. In Chapter 3, a separate review of archaeological evidence was made. A bias towards the urban monumental archaeology of the coastal littoral and conflict surrounding the ethno-linguistic origins and geographical emergence of the associated Swahili culture was seen to have dominated previous research issues. The available evidence was seen to support three alternative scenarios explaining the development of early East African coastal culture. Of these, the previous notion of a Southern Cushitic agro-pastoral origin for early coastal settlement is now being replaced by a corresponding emphasis towards the Bantu speaking, farming communities of the central coast of Tanzania. It was seen that the assumption of bounded cultural homogeneity had allowed regional trends to be extrapolated into wider generalised statements of coastal social and economic development. This is now recognised to hide the smaller scale dynamism that underlies local and heterogeneous regional communities. Both chapters have demonstrated the complex overlap between different ethno-linguistic, cultural and economic subsistence patterns that should now be recognised. In Chapter 4, this interrelationship was thus drawn together with a discussion of the contemporary socio-natural context of the immediate study region. Recognition of the inherent conflict between alternative interpretative perspectives throughout Stage 1 had justified the need for a detailed archaeological survey of the central and southern coastal hinterland of Kenya to be made.

In Stage 2, the methodology and results of this field work were explored. This was seen to provide new data for the revision of the changing patterns of settlement and cultural development within the study region. In chapter 5 the results of survey in seven regions were analysed, with emphasis placed on the changing pattern of site location and size over time. The excavation of five of these settlements was discussed in Chapter 6, and a chronostratigraphic framework established. In Chapter 7 a detailed analysis of the ceramic materials recovered from these excavated sites was reported. The results provide a revised typological sequence, with evidence for direct cultural continuity. Finally, in Chapter 8, analysis of the excavated faunal materials was used to illustrate a marked temporal variance in the respective subsistence economies.

This chapter will now consider how far the discussion outlined in Stage 1 and the new data collected during Stage 2 can resolve the existing conflicts between alternative histories. A summary of the evidence recovered from this study region will be combined into an overall assessment of regional change and development through time. This will be used to provide a (re)evaluation of the coherence between previous and new interpretative frameworks to which the results of this research are seen to directly relate.

9.2 Regional change and development: a temporal overview

The temporal overview is subdivided into five sub-headings, which are seen to follow the main periods of cultural development and change. As was noted in Chapter 3, these periods are not bounded and homogenous, but instead are seen to represent a degree of overlap and settlement continuity.

Stone-working, hunter-gatherer communities (before c. 600 AD)

The identification of stone-working, hunter-gatherer sites within the survey regions has not yet contributed enough new data to provide an adequate assessment of our existing knowledge (see Chapter 3). However, a few points can be drawn about the known distribution of stone-working sites and their later interaction and on-going assimilation with the iron-working, farming communities. As was discussed in Chapter 3, the distribution of sites are seen to be focused on the immediate hinterland of Mombasa, along the Low Coastal Plain and neighbouring Lutsangani and Pingilikani Uplands (see figure 9.1). Here survey and excavation by Omi *et al.* (1982, 1984, 1986, 1988, 1991) had established a sequence of lithic materials spanning the ESA, MSA and LSA technological periods. The present survey has now confirmed that this distribution extends northwards along the forested limestone ridge of the Dzitsoni Uplands and adjacent sandstone soils of the Kaloleni Upland, with MSA materials now identified in the northern margins of the Rabai Upland, southwards into the Kwale Upland, and west into the High Coastal Plain. The concentration of limestone rock shelters with MSA and LSA lithics, in association with wild faunal materials (Soper, R. 1966a, 1975) has been used to suggest that these communities occupied the margins between different socio-natural zones. Hence it seems they sought to maximise access to the varied natural resources offered in the immediate Lowland Rain Forest, the present Lowland Shale Savanna environment to the east, and the drier Lowland Dry Forest to the west. The northernmost occurrence of LSA materials within the study region is reported at the margin between the still existent Lowland Dry Sokoke Forest to the south, and the Lowland Rain Forest which would at one time have covered the eastern Sabaki River valley to the north (Moomaw, J. 1960).

The variation evident in LSA lithic industries has still not been adequately considered. However, it would seem that these groups represent a considerable temporal span. As was noted in Chapter 5, and the report on the excavations at Mgombani 02 and Chombo 01 in Chapter 6, the presence of later stone-working, hunter-gatherer communities is attested in the lowest levels of settlements with evidence for both early and middle iron-working, farming communities. In contrast to the emerging evidence from Tanzania (Chami, F. 1996, 1998), there is no confirmation that these communities produced their own early ceramics. However, as was seen in chapters 2 to 4, considerable interaction is believed to have existed between hunter-gatherer communities and their more sedentary agricultural neighbours. Remnant hunter-gatherer communities represented by the contemporary Waata, occupying parts of the Lowland Dry Sokoke Forest in the hinterland of Malindi, and the Degere and Vuna peoples located south of Mombasa, might well have been the hunter-gatherer Laa peoples to whom northern Mijikenda oral traditions refer. Like the Dahalo to the north, they might also be the descendants of an earlier Southern Cushitic speaking population who were assimilated into the expanding Bantu Sabaki peoples and later Eastern Cushitic Oromo pastoralists (Ehret, C. 1998; Stiles, D. 1982; Walsh, M. 1990, 1992/3). Whilst there is clear evidence for lithic tools being utilised on Kwale Ware and early TT/TIW settlements, as well as the repeated later use of rock shelters as sacred sites, this data is still too provisional to make any definite statements. However, the available parts do point strongly towards interaction and cultural continuity.

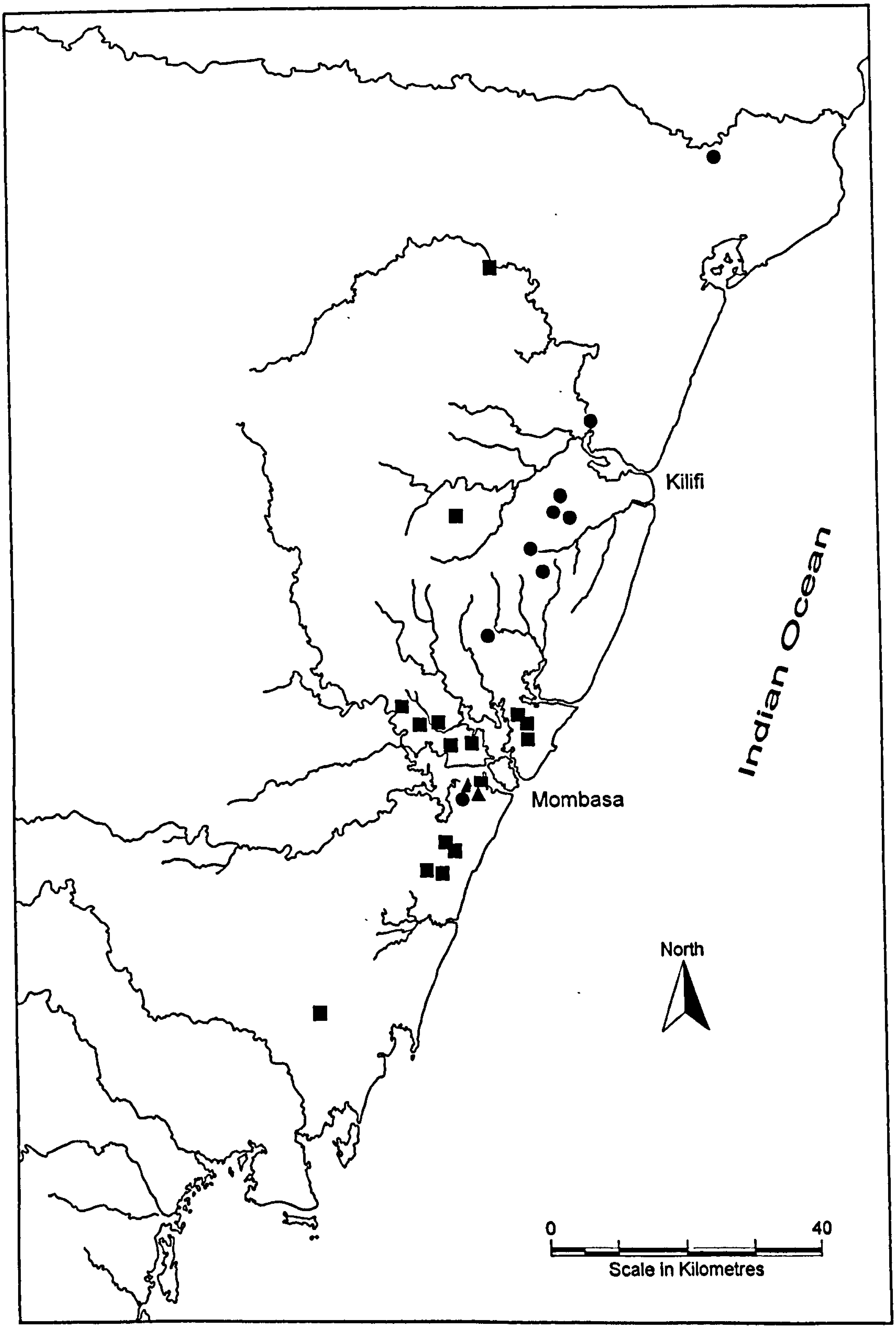

Figure 9.1 Map showing the distribution of early (triangles), middle (squares) and later (circles) stone-working, hunter-gatherer sites in the central and southern coast of Kenya

Early iron-working, farming communities (c. 100 BC-600 AD)

In Chapter 3 it was seen that evidence for early iron-working, farming settlement in the central and southern coastal region of Kenya was restricted to a small cluster of Kwale Ware sites on the Shimba Plateau, located south-west of Mombasa (Soper, R. 1967a). However, it is now clear that such settlement was much more widespread than had been previously accepted (Collett, D. 1985), with sites associated with Kwale Ware pottery now identified as far north as Mwangea Hill (see Chapter 5). The provisional distribution of these settlements would suggest that they favoured the same locational parameters to the later stone-working, hunter-gatherer communities. Hence there is a distinctive cluster now identified along the forested hills of the Kaloleni and Dzitsoni Uplands, and the east-facing escarpment of the Lutsangani Upland (see figure 9.2). As was seen in Chapter 4, these socio-natural zones have proved to have the most fertile soils with greatest agricultural potential. At present this settlement density is still relatively low, with only 12 sites so far identified. Similarly, the estimated size of these sites range between 0.12 ha and 3.0 ha, with a median size of 1.26 ha. This would suggest that settlement units were small, perhaps based on family or kin related groups. Furthermore, there is some evidence to suggest that these units were concentrated together in what Ehret (1998: 118, 188) has termed 'ridge-villages', in which individual farmsteads were interconnected along a single street running along a ridge top. This is most evident with the distribution observed in the Jibana survey region, which includes the excavated site of Mgombani (see Chapter 5), but is by no means conclusive. There is still no evidence that can be brought to bear on understanding the internal organisation of these settlements. At the site of Mgombani, a semi-circular arrangement of five post-holes was identified in the early levels of Trench Three (see Chapter 6). Whilst there was no evidence of any floor, it is possible that this represents the remains of an early house structure, and would thus be the earliest to have been so far identified in the coastal region of Kenya.

Currently there is no evidence to support Chami's (1998) temporal differentiation of early iron-working, farming pottery into an earlier Limbo phase. The Kwale Ware materials analysed from the excavated site of Mgombani would seem to represent a relatively late stage of the early iron-working, farming settlement. A single charcoal sample derived from a level with both Kwale Ware and TT/TIW pottery gave a likely date range of between the 7th and 8th centuries AD (Pta-7957; see table 6.6). In this respect, our earliest evidence is still that associated with the 3rd century AD radiocarbon date obtained from the Kwale type-site (Soper, R. 1967a). Until the further survey and excavation of early iron-working, farming sites is achieved, the presence of any earlier settlement within the study region continues to remain untested.

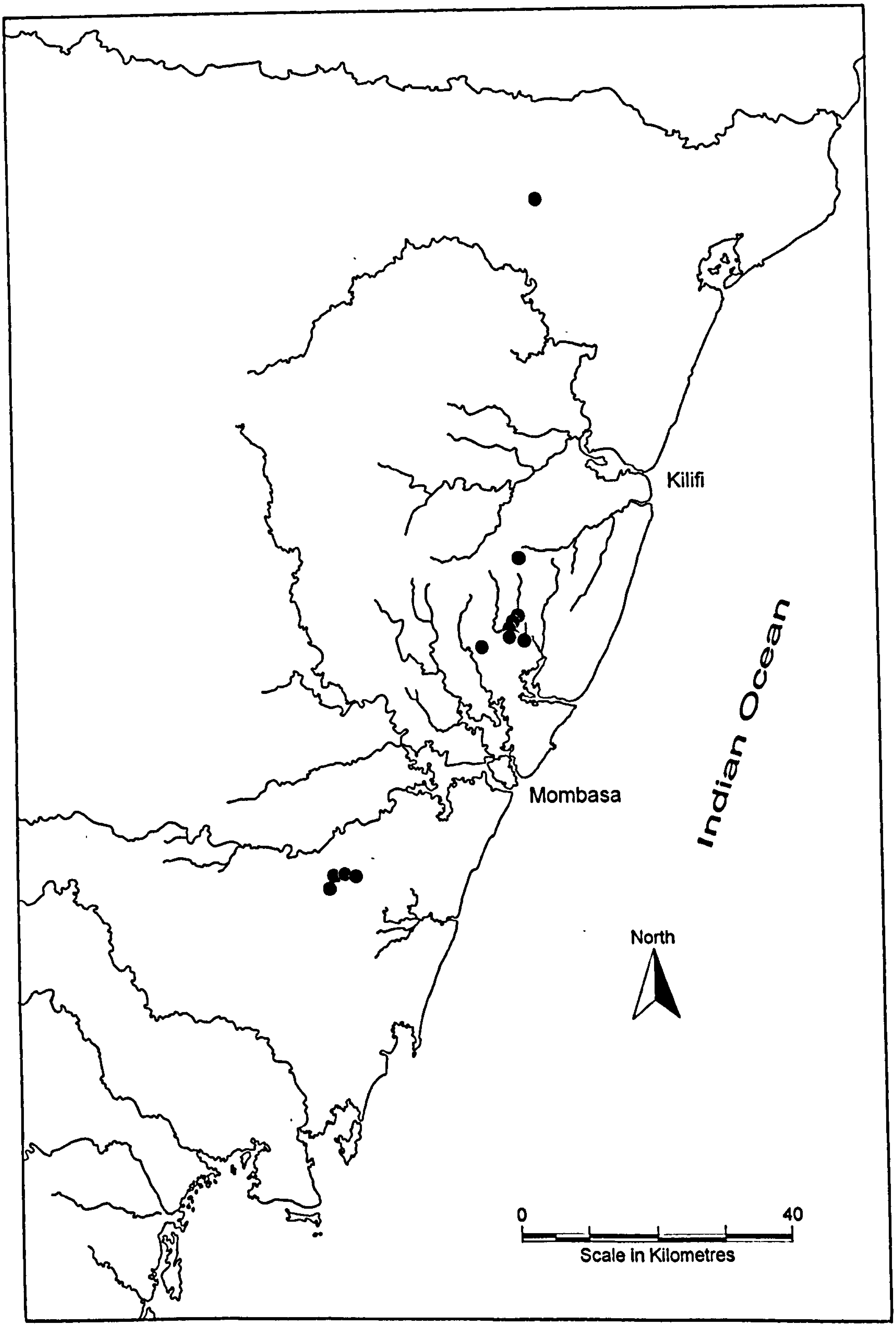

Figure 9.2 Map showing the distribution of early iron-working, farming settlements in the central and southern coast of Kenya

It should be noted that Chami's (1998: 209) definition of the Kwale phase, in which the pottery is characterised by a predominance of false relief chevrons has not been observed in the Mgombani assemblage (see figure 6.5: sherds a–i; and figure 7.3).

In contrast, the later Mwangia phase, defined as a transitional stage between Kwale Ware and early TT/TIW, would seem to form a valid group (Chami, F. 1998: 209). Decoration is seen to maintain many of those motifs observed in the Kwale Ware pottery, including bevels, flutes, comb stamping, and oblique incision, but also began to innovate with new decorative elements observed in the early TT/TIW pottery, notably an increasing tendency towards boldly executed grooving (see figure 6.5: sherds j – o; and figure 7.3). However, as was seen in Chapter 6, this transition is by no means clearly defined. Often previous classifications have obscured the visible variation into bounded and homogenous classificatory units. The application of correspondence analysis in exploring the typological distribution of decorative types has demonstrated that there is considerable 'fuzziness' and overlap between individual attributes (see figure 7.18). Although the pottery from Mgombani is seen to broadly confirm Chami's (1998) *'contextual pottery seriation'*, we must also be cautious in differentiating at which point in the ceramic typology Kwale Ware ends and early TT/TIW begins. Hence an important shift in ceramic analysis has been made through this attempt to recognise typological variability, rather than try to hide it through broad classification, as has been previously the case.

The absence of a Limbo ceramic phase would support the general hypothesis for a gradual movement of early iron-working, farming peoples northwards from the proposed proto-North East Coast Bantu linguistic homeland located between the Wami and Rufiji rivers of Tanzania (Nurse, D. and T. Hinnebusch, 1993). The general correspondence of Kwale Ware pottery with the present region of North East Coast Bantu speakers, and the late first millennium BC to early first millennium AD dates from early iron-working, farming settlements in central and north-east Tanzania would seem to confirm this view. However, the presence of Kwale Ware as far north as Mwangea Hills would also suggest that the 3rd century AD date from Kwale does not necessarily represent the earliest occurrence of early iron-working, farming settlement within the coastal region of Kenya. In this sense, the interpretation of a northern expansion can only be provisionally accepted. Indeed, allowing for the survey bias now evident, it would seem equally plausible that early iron-working, farming communities settled the central and southern coast region of Kenya at the same time as they did further south.

Ehret's (1998: 184-189) contrasting view, in which the producers of Kwale Ware pottery were derived from Upland Bantu speaking peoples ancestral to the modern day Thaigicu languages spoken in Central Kenya is not accepted here. This argument hinges on the earlier assumption that Kwale Ware and TT/TIW exhibited no typological similarity, a view that is now seen to be misplaced. At the same time, it also assumed that the Upland Bantu peoples inhabited the coast before the arrival of North East Coast Bantu. However, the linguistic evidence for this, a small set of very early Upland loan words in Sabaki and Seuta is problematical. Indeed, in view of the close association between Kwale Ware and the contemporary Kwamboo Ware identified in the regions occupied by modern-day Upland Bantu speakers (Di Blasi, M. 1980), this evidence for early interaction is not surprising. That such a linguistic relationship later existed during the 15th century AD, for example is well demonstrated by Nurse and Hinnebusch (1993).

Middle iron-working, farming communities (c. 600-1000 AD)

As we have seen, the evidence from multi-period sites has demonstrated that a considerable typological overlap exists between the early and middle iron-working, farming ceramic variants. Whilst elements of the earlier Kwale Ware pottery are seen to continue through into the later first millennium AD (see figure 7.18), notably the occasional use of thickened bevelled rims and bold oblique grooving, there are also a growing number of decorative motifs which are quite distinctive to the middle iron-working, farming period (see figure 7.4). The evidence from the central and southern coast of Kenya is thus seen to confirm Chami's (1994, 1994/5) findings in central Tanzania. No evidence for an earlier pottery variant is evident within the survey regions and the research does not support claims for the association of TT/TIW with earlier Southern Cushitic agro-pastoralists. If the TT/TIW pottery is seen to utilise elements of so-called Pastoral Neolithic pottery as Abungu (1989, 1994/5) has maintained, then it is clear that these would have been introduced into the pottery some time after the initial settlement of early iron-working, farming peoples. At the same time, the evidence for typological continuity between Kwale Ware and TT/TIW, evident in central Tanzania and central and southern Kenya, and the linguistic reconstruction of Bantu Sabaki languages would all suggest that this took place through later regional cross-cultural interaction (Nurse, D. and T. Hinnebusch, 1993).

Chami's (1998: 204) assertion that early TT/TIW pottery emerged from the central coast of Tanzania is equally no longer tenable. The survey and excavation of early TT/TIW settlements has provided new evidence for the early emergence of TT/TIW in the central and southern coast of Kenya. More significantly, it has demonstrated parallel evidence for early TT/TIW's transition from the Kwale Ware pottery of the early iron-working, farming period. Similar evidence would now appear to be emerging from the Upper Tana River valley (Kiriama, H. *et al.* 1996: 507), and perhaps along the coast of Mozambique (Sinclair, P. *et al.* 1993: 428). This also has important implications for the standard linguistic reconstruction of the development of the Bantu Sabaki languages (Nurse, D. and T. Hinnebusch, 1993).

As was seen in Chapter 2, the proto-Bantu Sabaki speakers are believed to have separated from other North East Coast Bantu language groups by around the 6th century AD. It has already been noted that this is seen to correlate well with the dating of the transition between Kwale Ware and TT/TIW pottery (Spear, T. 1999). However, rather than moving rapidly northwards, the evidence would now suggest that the later differentiation of proto-Sabaki took place as these communities developed *in situ,* following their settlement between the Pangani and Tana rivers (Pouwels, R. 1998: 292).

In Chapter 5 it was argued that the distribution of middle iron-working, farming sites is seen to be concentrated in the same socio-natural zones as was seen in the early iron-working, farming period. This contradicts previous assertions that there was a dramatic shift in settlement patterns (Ehret, C. 1998: 188). However, there is a notable increase in site density, with 24 sites now known. This is seen to mark the beginnings of a more intensive clearance of the forest, probably through shifting cultivation (Waiijenberg, H. 1994), and is comparable to intensification evident from other regions of iron-working, farming settlement (Maclean, M. 1996; Schmidt, P. 1997a; Schoenbrun, D. 1993; Taylor, D. and R. Marchant, 1994/5). As a result, there is a corresponding expansion of settlements beyond the Dzitsoni Upland and neighbouring margins of the Lutsangani and Kaloleni Uplands, and from the Shimba Plateau into the surrounding Kwale Uplands. Most significant of all is the evident shift in settlement onto the beach terraces of the Low Coastal Plain (see figure 9.3).

No evidence for early TT/TIW pottery was observed in the drier zones to the north and west of the coastal hinterland. Whilst by no means certain, it might well be significant that the area north of the River Sabaki, at least by the later iron-working, farming period, is seen to have settlements bearing a distinctive Wavy-Line pottery. These are commonly associated with southwards moving, Eastern Cushitic speaking pastoralists groups (see Chapter 3). Although generally identified with later TT/TIW pottery, notably at Shanga (Horton, M. 1996) and Gedi (Kirkman, J. 1954), it is equally possible that these groups initially restricted the settlement of this region by middle iron-working, farming communities. Interestingly, it is from about the 8th century AD onwards that the proto-Mijikenda languages are seen to become increasingly differentiated from the proto-Lower Pokomo, now seen to be settled along the Tana River (Nurse, D. and T. Hinnebusch, 1993; see figure 2.5). Indeed, the absence of any TT/TIW pottery in the Mwangea Hills might represent a temporary retraction of settlement southwards. As with recent interactions between northern Mijikenda and Oromo (Spear, T. 1978), the immediate coastal hinterland region north of the Sabaki River and south of the Tana River could perhaps represent a transitional zone between these different population groups (Abungu, G. 1989; Tinga, K. 1993).

The middle iron-working, farming settlements are seen to range in size, from small-scale individual farmstead units of 0.16 ha through to large-scale multi-component agglomerations of 7.56 ha, with a median settlement size of 1.26 ha (see Chapter 5). There is still inadequate data to reconstruct the internal structure and layout of these different settlements. Hence we are still dependent upon the results from open-area excavation of early coastal littoral settlements (Horton, M. 1993, 1996). It is unclear whether the central *'moro'* like enclosure observed at Shanga is also evident along the southern and central coastal hinterland of Kenya at this period, or was itself a later innovation adopted through contact with northern agro-pastoralist groups.

The increased variance between site size is seen to represent the beginnings of a growing settlement hierarchy. It would seem probable that the large-scale multi-component settlements reflected the emergence of settlement organisation comparable to that reported at Shanga and, through relational analogy, with the present-day Mijikenda Kaya. Indeed, the comparative assessment of Mijikenda oral traditions would suggest that the majority of so-called *'pre-Kaya'* and *'contemporary to Kaya'* settlements were established during the middle iron-working farming period (see Chapter 5). In this respect, the data at present would seem to confirm Willis' (1996: 96) assertion that the Kaya reflected the later evolution of these diverse settlements into ritual and political foci. Hence the Kaya were not new transplants brought by migrants from a mythical Shungwaya, but rather resulted from the culmination of a much longer and continuous process of settlement change and development (Muturo, H. 1990, 1994).

The settlement pattern can thus be seen to reflect a close interrelationship between coast littoral and hinterland communities (Fawcett, W. 1992; Horton, M. 1996; Kusimba, H. 1993; Wilson, T. 1982; Wright, H. 1993). Whilst it is clear that population increased from the early iron-working, farming period, it cannot be seen as a causal factor for the emergence of this growing social complexity (see Maclean, M. 1996). Similarly, continuity in the material culture, notably the transition between Kwale Ware and early TT/TIW ceramics, and the continued occupation of early iron-working, farming settlements, allows us to rule out wide-scale population immigration by southwards expanding Southern Cushitic speakers (Chami, F. 1994: 96-97). However, the evidence for the expansion of exchange networks, particularly the transoceanic links through coastal littoral settlements, is seen to have played a pivotal role in the development of emerging regional polities (Chami, F. 1994, 1998; Horton, M. 1996).

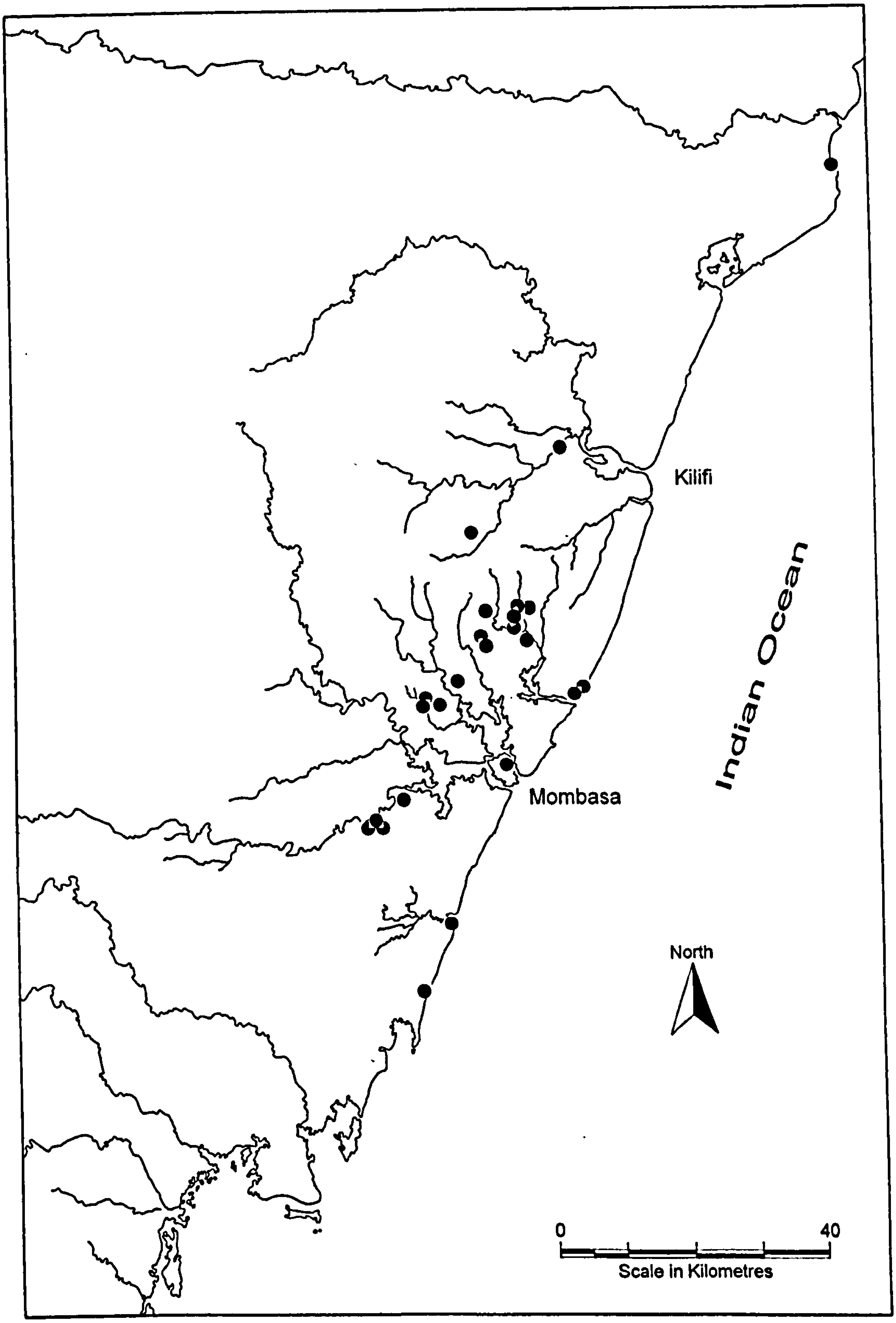

Figure 9.3 Map showing the distribution of middle iron-working, farming sites in the central and southern coast of Kenya

In this context, it is not so surprising that the archaeological evidence would suggest no great change in the subsistence economy. The faunal materials excavated from the early to middle iron-working, farming settlement at Mgombani were seen to be poorly preserved. However, they provided a general picture of a self-sufficient farming community who raised domestic livestock, including sheep/goat and some cattle, as well as chicken, and also hunted a range of wild animals for food (see Chapter 8). Clearer archaeological evidence was identified from the middle iron-working, farming settlements at Chombo and Mteza. Both settlements gave radiocarbon dates of between the 8th and 10th centuries AD (Pta-7978 and Pta-7955 respectively; see table 6.6). Here the faunal remains were seen to correspond, with each assemblage reflecting only a minor reliance on domestic livestock, with sheep/goat being considerably more prominent than domestic cattle. At the same time, there was a significant dependence placed on hunted wild fauna, with the diversity of taxa suggesting skilled hunting strategies were employed to exploit the full range of locally accessible resources. Similar subsistence strategies are reported for many iron-working, farming communities in eastern and southern Africa (Adamowicz, L. 1991; Haaland, R. 1994/5; Maggs, T. and G. Whitelaw, 1991; Morrais, J. 1988; Pwiti, G. 1996; Segobye, A. 1994), and whilst no comparative analysis of faunal materials is yet known, the evidence would point strongly against a Southern Cushitic agro-pastoral origin.

Both Mgombani and Chombo had evidence for iron-working, in the form of iron slag, fragments of tuyere and iron artefacts. Evidence for cultivation was less direct, and was restricted to a fragment of iron hoe at Mgombani, and a sample of as yet, unidentified burnt seeds from Chombo (trench 3, context 10). Analysis of the early TT/TIW ceramic fabrics would suggest that pottery was produced on a localised level, with no evidence for exchange between different localities. However, connections with the coastal littoral at this period are confirmed by the identification of imported goods, both fragments of a glass vessel from Mgombani and Chombo, as well as glass beads, and Sasanian pottery from Mgombani, and Chinese Yue stoneware and hatched Sgraffiato from Mteza. That evidence of such imported goods are extremely few suggests that this exchange was carefully regulated, with the presence of presumably high status imports perhaps reflecting the emergence of some social stratification. If so, then it would appear likely that these individual homestead heads would have maintained this status through their control over the regular products of economic exchange (Abungu, G. 1989; Abungu, G. and H. Mutoro, 1993).

Later iron-working, farming communities (c. 1000-1650 AD)

As can be seen in figure 9.4, there is a dramatic increase in settlement density during the later iron-working, farming period with 123 sites with late TT/TIW pottery now known. The distribution of these sites would suggest that populations continued to expand within the region of middle iron-working, farming settlement, with considerable evidence for the continued occupation of many of the early TT/TIW sites. At the same time, these later iron-working, farming communities moved into new territories, expanding beyond the fertile soils of the eastern Kaloleni, Dzitsoni and Lutsangani Uplands into the drier, less agriculturally productive soils of the Rabai and Kinango Uplands, and west into the High Coastal Plain.

Similarly, there was considerable settlement of the northern regions, with late TT/TIW sites evident along the fertile alluvial soils of the Sabaki River valley, and reoccupying the lower foothills of Mwangea. As we have already seen, such communities interacted with the producers of the distinctive Wavy-Line pottery, notably at the site of Marafa, and at least as far south as Gedi (Collett, D. 1985; Kirkman, J. 1954; Tinga, K. 1993). It is tempting to equate the producers of this pottery to the pastoralist *'Mossegeujos'* who lived in the neighbourhood of Malindi, and who were first recorded by the Portuguese in 1569 (see Chapter 2). Associated with the modern-day, Thaigicu speaking Segeju, these people were later to reappear on the southern coast of Kenya, near Vanga as sedentary mixed farmers, and are now almost completely assimilated amongst the southern Mijikenda. Whilst it is impossible to link these two groups together on the basis of archaeological evidence alone, it is perhaps possible that the notion of Shungwaya was formed through this resulting multi-cultural contact. Whilst Allen's (1993) argument that the Segeju *'ruled'* Shungwaya can not be taken literally, it still remains plausible that the notion of Shungwaya was introduced through the later incorporation of such sedentarised ex-pastoral groups (Pouwels, R. 1987: 12).

With the expansion of settlement into the drier socio-natural zones to the west and north, there is a corresponding shift in the general subsistence production of later iron-working, farming communities. The faunal evidence from Mtsengo was seen to have had a greater dependence on domestic livestock as opposed to hunted species, with cattle remains forming over 47% of the total faunal assemblage. At the same time, evidence for marine fish species suggested that the local exchange networks brought food products into the settlement from as far as the coastal littoral, a distance of at least 30 km. At Mbuyuni, the same shift towards cattle is evident, with a single specimen of thoracic humped Zebu cattle (*Bos indicus*) identified, confirming their presence on the East African coast by at least the later iron-working, farming period (Blench, R. 1993: 77-78; Clutton-Brock, J. 1993: 66-67). It would therefore seem likely that the change in settlement patterns was enabled through the development of a subsistence economy with greater emphasis towards regional diversification, thus enabling the exploitation of a greater range of socio-natural zones. Such a change was enabled by the adoption of domestic livestock in regions unsuited to intensive agriculture, and a growing network of economic ties that both encouraged and enabled the production of a communal surplus for regional exchange.

This is further illustrated by the intensity of non-subsistence production at Mtsengo. Iron-working is seen to continue at Mtsengo on a considerable scale, with over 63 kg of iron slag as well as clay tuyere fragments identified. Copper artefacts are also present, and there is some indication for the on-site smelting of copper in the form of small pieces of copper slag, and a pit feature (trench 2, context 66) filled with lenses of greenish, perhaps coppery sand (see Chapter 6). However, little evidence for metal production was evident from Mbuyuni, with only a small fragment of iron slag, and few iron and copper artefacts found. No evidence for imported pottery, but a varied selection of imported glass 'trade-wind' beads (Davison, C. and J. Clark, 1974), were collected from Mtsengo. At Mbuyuni, imported pottery included several sherds of Chinese white porcelain, Near Eastern Gudulia water jars, and Isamic monochromes. In contrast, only one short drawn, light blue glass-bead was recovered. Mutoro's (1987, 1994/5) surface collection and excavation at the Kaya settlements demonstrated a greater concentration of imported pottery, notably Islamic monochromes and polychromes dating to between the 14th and 15th centuries AD, than were seen here, suggesting some differentiation existed between the large multi-component sites.

The pattern of cultural continuity and contact is again reinforced by the analysis of the excavated pottery. Archaeological evidence from the central coast of Tanzania would appear to have reflected a break in contact between the northern and southern East African coast during the 10th and early 13th centuries. According to Chami (1994, 1998) this disjuncture, due to the earlier adoption of Islam on the northern coast, resulted in decline of early TT/TIW settlement and the later innovation of a southern regional ceramic style, termed Plain Ware (see Chapter 3). Whilst not able to test this assessment south of Tanga, it has confirmed that there was no such decline evident on the central and southern coast of Kenya. In the lowest layers of Mtsengo, the ceramics are seen to have continued from the middle iron-working, farming period, with many attributes comparable to those observed from the excavated assemblages at Chombo and Mteza. However, in the later levels, these attributes become increasingly restricted in their application, with a growing tendency towards simple lines of punctates and a general decline in the number of decorated sherds (see Chapter 7; figure 6.5-6.6).

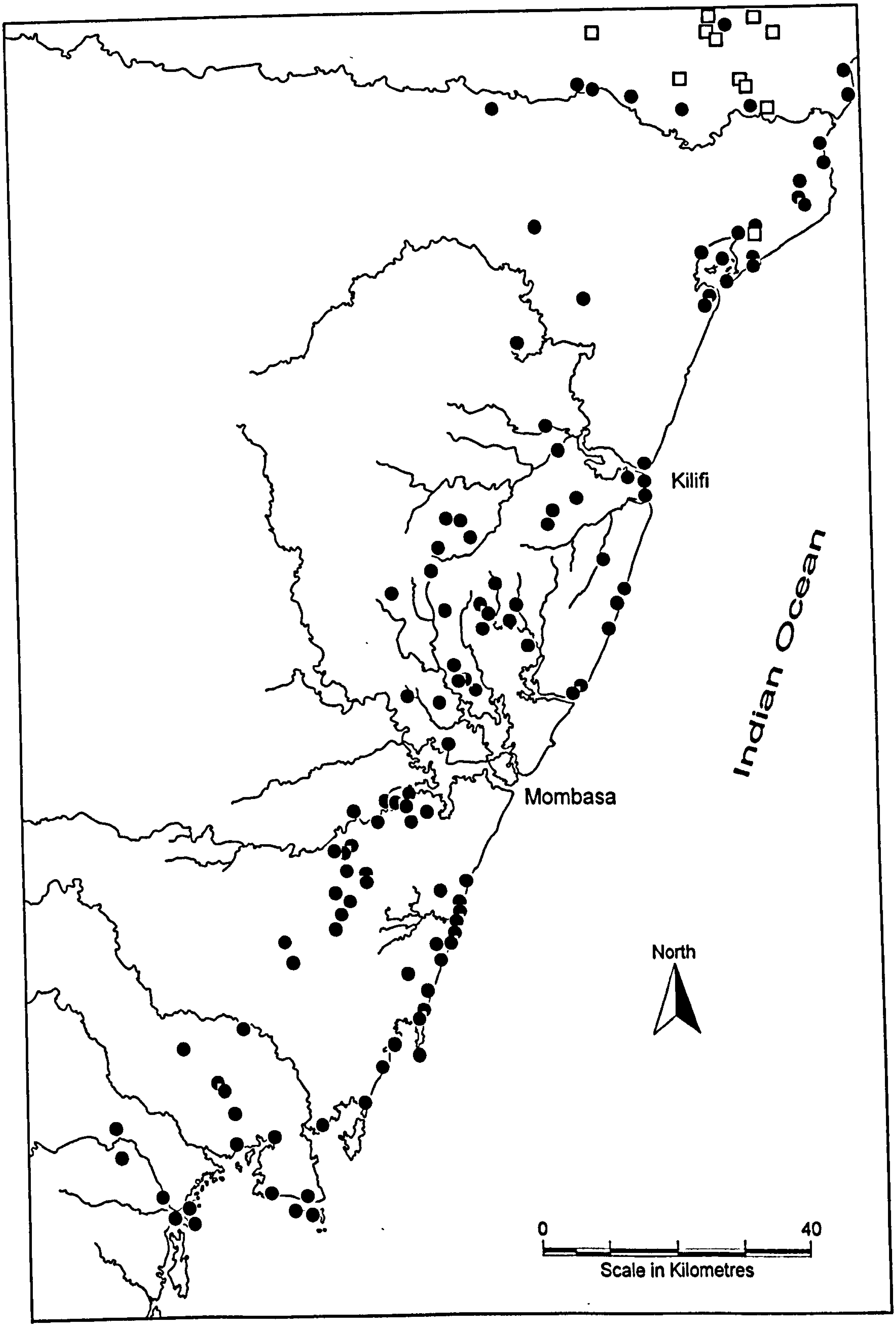

Figure 9.4 Map showing the distribution of later iron-working, farming (circles) and so-called agro-pastoral (squares) sites in the central and southern coast of Kenya

This is seen to be comparable with other excavated late TT/TIW pottery from coastal littoral urban settlements in northern and southern Kenya (Horton, M. 1996: 260-270; Kirkman, J. 1952, 1954, 1963; Kusimba, C. 1993; Wilson, T. and A. Omar, 1997: 48). Hence, there is no evident cultural distinction between the ceramics from the coastal littoral and hinterland settlements, although regional variance is now becoming evident. A single radiocarbon date from Mtsengo gave a date range of between the 14th and 15th centuries AD (Pta-7956; see table 6.6) for these later phases. At the site of Mbuyuni, it is only the later TT/TIW pottery that is present. Again, localised difference is evident between this assemblage and that at Mtsengo, but the general correlation between individual attributes clearly confirms typological continuity between the two, with occasional elements of early TT/TIW still being used (see figure 7. 18). A radiocarbon date from Mbuyuni was seen to give a date range of between the early 15th and mid 17th centuries AD (Pta-7965; see table 6.6).

Corresponding with the observed spread of settlement, the median size of most sites was seen to have decreased to 0.59 ha (see Chapter 5). Whilst continuity of occupation is evident on many of the larger multi-component settlements whose beginnings were observed during the middle iron-working, farming period, it would seem that the majority of settlements began to form a much more dispersed pattern of small homestead units. In this sense, the growing settlement hierarchy is seen to have fully matured, with a small number of large multi-component regional centres dominating the surrounding satellite homesteads (Mutoro, H. 1987, 1988b, 1991). This is most evident along the coastal littoral itself, where a number of small towns are seen to evolve either from earlier middle iron-working, farming settlements, or as completely new foundations (see Chapter 3).

It is unclear how far these settlements are seen to have been 'Swahilised'. Linguistically the Swahili language had begun to emerge during the middle iron-working period, differentiating into a northern and southern group by around the 9th century AD, with the northern Swahili further splitting into regional dialects into the 15th century AD (see figure 2.5). At the same time, the linguistic evidence would point to the increased differentiation between northern and southern Mijikenda dialects from the 11th century AD onwards. It is at this period then that both the archaeological, linguistic and oral evidence are seen to correlate with the final emergence of the Kaya complex, and a respective development of individual localised Mijikenda group identities. However, rather than forming an image of centralised group residence, the Kaya whilst politically and perhaps ritually significant, formed only the upper levels of a complex settlement hierarchy now evident through this growing settlement multiplicity.

Early modern settlement evidence (c. post-1650 AD)

From the mid-17th century onwards, the decoration of local pottery in the central and southern coast of Kenya is seen to become increasingly sparse, although some attributes associated with the late TT/TIW are still retained (Kirkman, J. 1974; Mutoro, H. 1987; Ndiri, W. 1992: 152). In some instances, these plain wares are seen to occur with later 18th and 19th century European, Chinese and Indian imports. As such, the 164 sites identified with the pottery characteristic of these later plain wares have all been ascribed to the early modern period. In addition, a further 65 sites were identified which could not be evaluated archaeologically. These were often associated with local Mijikenda oral traditions, either as areas of former settlement or as sacred foci, including 44 Kaya settlements and 13 Sacred Groves, to which access was denied.

The distribution of sites which can be ascribed to the early modern period are seen to reflect a further intensification of the settlement pattern observed in the late iron-working, farming period (see figure 9.5). However, at the same time, there was a general trend towards settlement fragmentation. Whilst a number of smaller late TT/TIW sites appear to have remained occupied, many of the larger, multi-component sites evident during the middle and later iron-working, farming period would appear to have been in decline. Thus, both Mtsengo and Mbuyuni appear to have ceased in their role as major settlement foci. This trend is also represented by a decrease in the range of site sizes, now falling between 0.01 ha to 5.5 ha, with an overall median size of 0.74 ha.

The increasing number of identified early modern settlements and the general fall in site size is seen to represent a gradual breakdown of the previous social organisation, as small independent family-based homesteads became more prevalent. Such a model is supported by comparative assessment of local Mijikenda oral traditions. Of the 66 early modern settlements that could be directly associated with collected local histories, 70% were reputedly found by individual clan members following their movement from their respective Kaya (see Chapter 5). Remembered as a period of social disorder in which the traditional values and political control of the Kaya were in decline, the traditions are therefore seen to provide an eloquent, but idealised explanation for this final period of political and economic change. Between the 16th and 19th centuries AD, the rise of Portuguese and then later Omani control along the East African coast is seen to have weakened the socio-economic relationships between town and rural hinterland. The previous subsistence orientated trade gave way to market orientated trade, and the existing independent regional polities were integrated and eventually superseded within the wider colonial network (for an historical overview of this period and its impact on the coastal hinterland, see Pearson, M. 1998; Pouwels, R. 1987; Spear, T. 1978; Willis, J 1993, Willis J. and S. Miers, 1997).

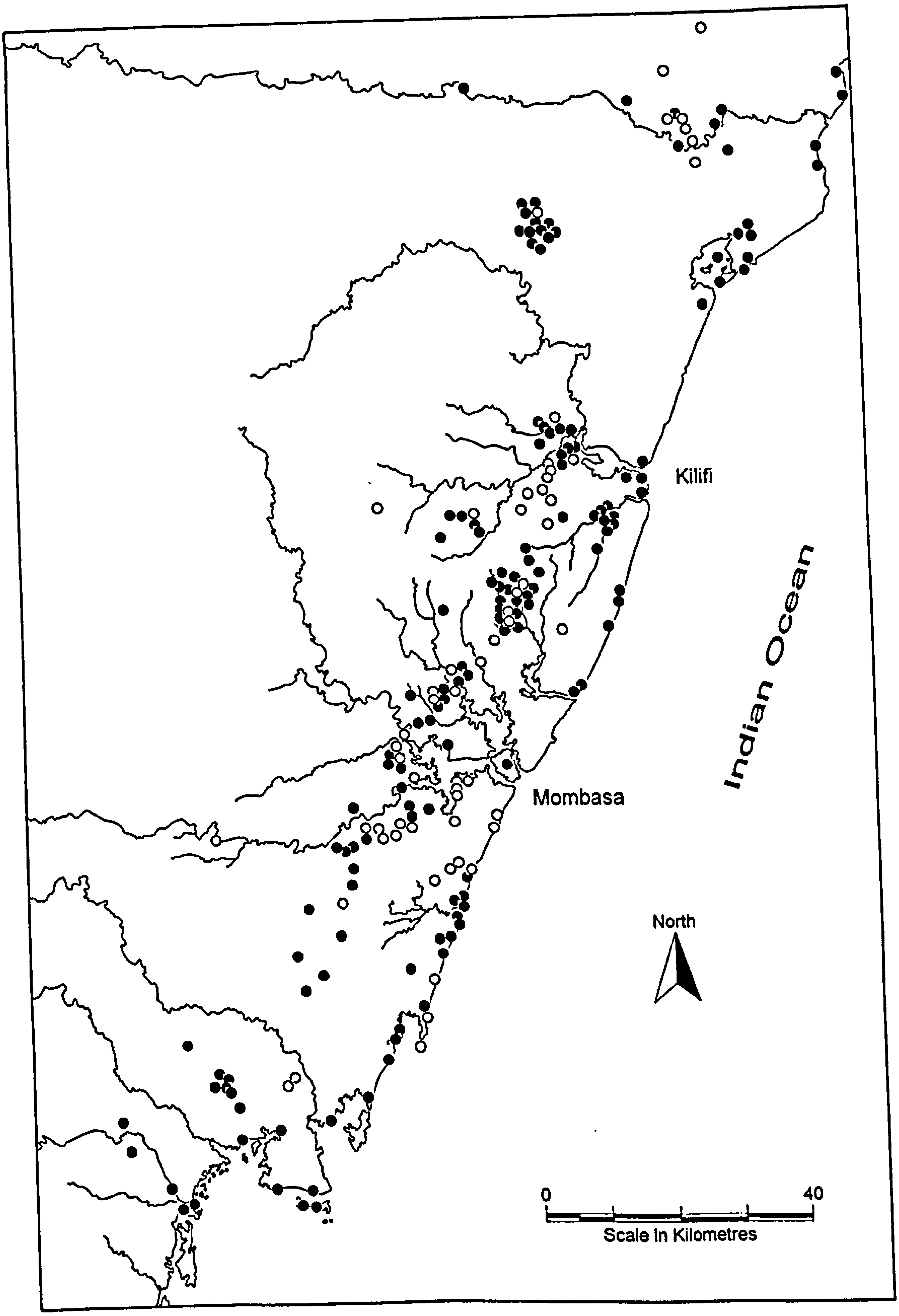

Figure 9.5 Map showing the distribution of early modern (closed circles) and archaeologically 'unknown' (open circles) sites in the central and southern coast of Kenya

9.3 Conclusion: a tentative historical narrative

This chapter has established a general temporal overview of the changing pattern of settlement and subsistence within the central and southern coast of Kenya. An emerging trend of cultural development and population continuity has replaced the previous standard culture-historical framework of cultural discontinuity and later population migration. At the same time, the work has contributed significant new data that can be seen to resolve the previous conflict surrounding the cultural and ethno-linguistic identity of early coastal peoples.

Thus it would seem clear that early iron-working, farming communities, speaking a proto-North East Coast Bantu language, emerged on the East African coast from the later first millennium BC. Interacting with and probably integrating the existing dispersed population of presumably Southern Cushitic stone-working, hunter-gatherer communities they had, by around the 6th century AD, differentiated into the Seuta, Ruvu, Pare and Sabaki. During this time, the early Kwale Ware had evolved into the early TT/TIW pottery of the middle iron-working, farming period. The proto-Sabaki speakers are seen to have expanded northwards along the coastal littoral and immediate hinterland, eventually occupying a region approximately situated between the Pangani River in Tanzania to the Tana River in northern Kenya. With this expansion, they established settlements within the most agriculturally favourable socio-natural zones and interacted with neighbouring agro-pastoral peoples. Over time, this led to a growing regionalisation, and by the end of the first millennium AD had resulted in the emergence of closely related, yet distinctive groups who had fully adapted themselves within their local environment. With this regionalisation, local independent but interconnected exchange networks evolved, with the settlements of the coastal littoral acting as intermediate points between an increasingly burgeoning external transoceanic trade and the immediate interior communities.

From the second millennium AD, the apparent homogeneity of early TT/TIW pottery is seen to have become increasingly varied as both the regional material cultures and localised ethno-linguistic identity become increasingly defined. Only with the majority assimilation of Islam did an emerging unified Swahili identity evolve on the coastal littoral; a distinction from coastal hinterland communities which becomes increasingly marked following the breakdown of autonomous polities under the colonial impact of first Portuguese and later Omani sovereignty. No sharp boundaries marked these developments. Rather it is only when we attempt to correlate these ethno-linguistic identities and archaeological cultures together that these complex interrelated changes appear to be disjoined, homogenous and discontinuous.

What then of Shungwaya and the geographical focus for an emerging Swahili identity? If we accept the outline suggested above, then it would appear that the standard historical interpretation of Shungwaya requires a serious rethink. No evidence for population migration is evident and the notion of a 16th Mijikenda migration southwards from Shungwaya must now be discarded. Yet at the same time, there are subtle shifts in both the pattern of settlement and subsistence economy that, from the early second millennium AD do bear some testimony to the basic structure of these local oral traditions. The emergence of autonomous multi-component settlements can be equated with the antecedents of the contemporary Mijikenda Kaya. At the same time, there is a growing shift towards livestock herding. From the later second millennium AD the autonomous polities are seen to fragment into smaller units, comparable with settlement patterns visible today. It is to these changes that the later Mijikenda traditions of Shungwaya are therefore most closely seen to relate. However, we are still left with many questions that do not seem answerable within the present data parts available. The process underlying the gradual incorporation of livestock within local subsistence economies is still unclear. Similarly, little is known about the integration of such local subsistence within the growing social and political hierarchy now becoming evident. It is to this later period of East African coastal history then, that the greatest conflict between existing interpretations can now be seen.

Chapter 10 (Re)Interpretation: some future concerns

'Interpretation can only ever be momentary' (Hodder, I. 1999: 43).

10.1 Introduction

This thesis has focused on the archaeological evidence for iron-working, farming communities in the central and southern coast of Kenya. It has demonstrated that these communities were active participants within a regional network of social and economic interaction. At the same time, it has shown that this development formed a long-term and continuous process, which was interminably linked to patterns evident within the wider East African coast. By establishing a detailed regional study, it has thus provided an independent interpretative framework upon which themes introduced within Chapter 1 could be evaluated. These themes have highlighted the inherent conflict between existing coastal histories; conflicts which have proved to be embedded in both past and present prejudgements surrounding the origins and development of East African coastal cultures. The adoption of a reflexive hermeneutic framework has sought to integrate this existing data into a new coherent whole. In this way, it has tried to break free from existing dichotomies that are seen to impede our flexibility in the exposition of new data. The most significant contribution of this study has therefore been to resume a discourse between alternative interpretative perspectives through which new questions and new data will now need to be met.

10.2 Regional trends

Embedded within notions of Shungwaya and the northern origin of coastal urban development, the previous assumption of culturally disjoined and discontinuous habitation within the central and southern coast of Kenya has now been disproved. Instead, the results from intensive field survey have demonstrated new evidence for a widespread and evolving pattern of settlement, from dispersed stone-working, hunter-gatherer communities through to the growth and later fragmentation of autonomous and centralised regional polities. Five significant points have been made:

- *An extensive distribution of iron-working, farming communities is now evident within this study region, spanning the early first to later second millennium AD. The observed variance between the material cultures of these early, middle, and later iron-working, farming periods provides strong evidence for long-term cultural continuity and social and economic development.*

- *Thus, the notion of a rapid population movement of early proto-Sabaki speakers into northern Kenya is no longer verified. Rather there is evidence for the gradual northern expansion of settlement, from the early first millennium AD, with individual proto-Sabaki groups differentiating in situ through localised adaptation within their respective socio-natural landscapes.*
- *Likewise, there is no evidence for later population immigration within the study region. The interpretation of a 16th century AD southwards migration by the Mijikenda peoples from Shungwaya is not supported by the new archaeological evidence. Rather, the antecedents of the contemporary Mijikenda peoples are seen to have developed within their present location over the last two millennia.*
- *The emerging picture provides confirmation that early coastal culture did not originate on the northern coast of Kenya. However, it also questions the corresponding assertion that it originated on the central coast of Tanzania.*
- *Instead, it has been shown that the observed pattern of settlement reflects the dynamic interaction between different neighbouring peoples, closely integrated within the changing patterns of localised subsistence economies, social relations and the consolidation of political/ritual power.*

In this sense, regional data can no longer be simply extrapolated to form sweeping generalisations about East African coastal history. Comparative assessment is required on a regional basis, whereby similarities and variance can then be individually compared to form cross-regional patterns of development and inter-relatedness. Rather than seeking to define fixed boundaries within which archaeological cultures can be placed, research should begin to identify those elements which are seen to constitute the complex interplay of dynamic and overlapping spheres within which these past peoples have interacted.

10.3 Human landscapes

The present discussion has been based on observed changes within the patterns of settlement distribution and their associated material cultures. The identification of socio-natural zones within the study region facilitated the interpretation of this settlement evidence within the changing patterns of local subsistence. It was seen that the early emergence of iron-working, farming communities took place on the forest margins of the fertile coastal uplands, where a mixed agricultural and hunter-gatherer subsistence could be practised. With the later growth of increased social complexity, there was both a corresponding expansion of this distribution into previously unoccupied neighbouring environments, and a gradual shift towards the incorporation of larger numbers of domestic livestock. In the coastal hinterland, settlement hierarchies are seen to have emerged, with dispersed small-scale farmsteads supporting large-scale multi-component villages. This was comparable to the contemporary urban growth evident along the coastal littoral. At the same time, external exchange networks were maintained between these interdependent, but autonomous polities, incorporating local production within the developing external long distance trade connections. It was argued that these changing patterns reflect the interactive relationship that existed between the inhabitants and their landscape. There is no evidence for dramatic social upheaval. Rather, the data would point towards a long-term and continuous development as individual communities learnt to utilise, and were themselves transformed within their surrounding environments.

However, it has been difficult to reconstruct the surrounding patterns of land-use and cross-cultural interaction that clearly occurred between different subsistence based groups. The emergence of local identity, evident through linguistic differentiation and cultural variability is seen to be a response to the network of shared social, economic and political relationships, both internally within each local community, and externally through outside contact. The differentiation between farmers, pastoralists and hunter-gatherers is therefore less distinct than was previously assumed. So too is their arbitrary division into fixed ethno-linguistic categories. The available historiography, comparative linguistic studies and archaeological evidence all point towards interaction, exchange and restructuring of social relations and cultural identity between different peoples at different times. Hence, the origins of East African coastal cultures are not seen to lie with any one group or means of subsistence production. Rather it is through the regional amalgam of distinct but interrelated communities within a varied landscape that this process of development should be sought.

10.4 Interpreting the material past

Previous notions of bounded and homogenous cultural entities have been constructed through the need to simplify the evident cultural variability into manageable classes of *'meaningful'* data. This required the identification of shared diagnostic trends between material assemblages. Consequently, localised attributes were thus seen to have no significance in the wider interpretation of spatial and temporal change. In this thesis, it has been argued that variability within and between regions is equally significant. The observation of individual stylistic attributes between ceramic assemblages has shown how assumptions of homogeneity have created artificial boundaries. The previous artificial separation between an early and later so-called *'Iron Age'* cultural complex is thus replaced by an overlapping pattern of gradually increasing differentiation as communities established their own regional identities.

At the same time, it is also clear that pottery as part of this wider multi-faceted material culture, is not on its own a valid indicator of ethno-linguistic affiliation. The changes in pottery style have been seen to correspond with the wider changes observed within social and cultural development. They are not seen to relate to population discontinuity and migration. In the same way, neither should the wide spatial distribution of shared pottery attributes necessarily relate to a uniform cultural identity. That there is no clear distinction between the pottery assemblages recovered from coastal hinterland communities with those observed from the coastal littoral clearly reflects this fact. In this respect, further analysis of cross-regional and temporal variability between all aspects of local material cultures is now seriously required.

10.5 Social dynamics

The variance observed within subsistence production over time is seen to denote internal transformation within these developing societies. The growing differentiation between settlement size and location, the increasing significance of cattle, and changes in pottery style and function are all seen to be part of a wider shift towards growing social complexity. In the same way, the changing social organisation within communities is seen to reflect greater differentiation and the emergence of a social elite. The incorporation of imported high-status pottery and glass, both in the coastal littoral and hinterland settlements is seen to reflect a transition towards a more commercially orientated economy. The emerging pattern of settlement with dispersed farmsteads and large multi-component villages is thus seen to reflect growing differentiation within society as communities carried out diverse subsistence and non-subsistence based activities. The large settlements can be seen as economic and political foci, with different peoples practising different production activities. These are in essence the antecedents of the contemporary Mijikenda Kaya settlements. However, it was probably only in the later second millennium AD that these sites took on their now primary ritual function. This can be seen as a response both to the emerging stress placed on natural forest resources and fertile agricultural lands, as much as to the later breakdown evident in the existing regional networks of exchange and attempts to retain earlier social and political structures.

10.6 Looking to the future

This research has integrated the past patterns of settlement, subsistence, and social organisation to reconstruct a regional picture of continuity and change through time. Whilst this has helped to critically evaluate existing *'Conflicting Histories'* it has, by its nature, also emphasised how little is still actually known. The need for the continuation of research within this and neighbouring regions has been made clear through the rich archaeological record that is now seen to be awaiting future examination. This thesis thus provides a framework through which future research questions on regional development in the East African coast can be continued.

Cross-cultural interaction between different ethno-linguistic and subsistence groups:

Further evidence for the early Southern Cushitic speaking agro-pastoral and hunter-gather communities, and their later assimilation by both Bantu speaking iron working, farming communities and later Eastern Cushitic speaking pastoralists should now be sought. This requires continued survey and excavation of settlement evidence in other socio-natural environments, particularly north of the River Sabaki, in the hinterland of Malindi. At the same time, a detailed examination of all later stone-working activity is required, with an analysis of the temporal and spatial variance in lithic industries, and an assessment of continuity into the early iron-working, farming period. In this respect, a further detailed survey of iron-working, farming settlement should be undertaken to establish their earliest occurrence, and geographical extent within the coast region of Kenya.

The socio-natural landscape:

This should seek to assess both natural influence upon the changing patterns of settlement and land-use, and at the same time, explore how human activity has modified the landscape over time. In this way, the history of vegetation, climate and the agricultural potentiality of past soils will help in understanding the observed changing pattern of past subsistence economies. Only then will research be able to move beyond the restricted study of settlement areas and begin to understand their context within the socio-natural landscape as a whole.

Internal settlement organisation:

There is still little that is known about the processes underlying social development within the study region. Whilst this has been partially mapped through the clear evidence of a growing settlement hierarchy there is still no assessment of these changes within the internal organisation of settlements. No large-scale horizontal excavation of a settlement area has so far been undertaken within the coastal hinterland of Kenya. Yet the small-scale excavations reported here have now demonstrated that these settlement areas have excellent potential for establishing both the layout and intra-site variance of material culture through time. By exploring the social and political dynamics within individual communities we will thus be in a far better position to understand the past in terms of peoples daily relationships and interactions within the wider world.

10.7 Conclusion

Overall, this thesis has attempted to explore a number of interconnected themes which are seen to shed new interpretative perspectives on the development of early East African coastal communities. It has questioned the long-accepted standard interpretation of a discontinuous and static Mijikenda past. In its place, the past as reported here, is one of long-term continuity and dynamic social transformation, with local communities responding to changes both, through internal development and external inter-relationships. Five broad chronological periods have been identified. These do not represent discrete bounded and homogenous stages, but rather form overlapping and fluid transitions, the cumulative process of which is seen to still partly influence the contemporary social, economic, political and cultural relationships now evident today. The results of this study have by no means provided a complete reconstruction of this region's past. However, it has highlighted the complex and variable processes to which further study must now begin to be addressed. In this way, rather than restricting history into a traditional culture-historical mould it has sought to open new debate within a contextualised understanding of the varied and continuously changing past.

Appendices and Bibliography

Appendix A. Gazetteer of Archaeological Sites by Survey Region

Note: a completed copy of each Site Record and all collected surface materials are held at Fort Jesus Museum, Mombasa.

A.1. Mwangea Hill Survey Region

HfJw2 Mwangea 03
Map Sheet: 192/3
UTM Coordinates: 37M 580700 9636800
Period: Post 1500 AD ?
Ceramic Tradition: Plain Ware
Function: Rock Shelter
Area: c. 0.03 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: III
Elevation: 300 m

Located on the steep, west facing slope of Mwahera Hill, this rock shelter was first recorded by Soper (1966) during a reconnaissance visit to Mwangea Hill. The site forms a small but dry shelter overlooking the Kiswani plain below. Observed surface pottery is undecorated. No surface collection was made. However, evidence for earlier utilization might well be demonstrated by excavation. Local informants did not refer to this site.

HfJw3 Mwangea 04
Map Sheet: 192/3
UTM Coordinates: 37M 579000 9639500
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open settlement
Area: c. 0.03 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: III
Elevation: 350 m

Located on the steep, west facing slope of Mwangea Hill, this settlement area was recorded by Soper (1966) as a *'modern Giryama site'*. Observed surface pottery was undecorated. No surface collection was made. Local informants made no reference to this area.

HfJw5 Mwahera 01
Map Sheet: 192/3
UTM Coordinates: 37M 582542 9635372
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.03 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: III
Elevation: 300 m

This site is situated on the cultivated, south-east facing slope of Mwahera Hill. Local informants believe this site to have been occupied intermittently since the late 19th century AD Giryama expansion north. All observed surface pottery was undecorated; no surface collection was made.

HfJw6 Mwahera 02
Map Sheet: 192/3
UTM Coordinates: 37M 582489 9635455
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.01 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: III
Elevation: 320 m

Situated on the cultivated, south-east facing slopes of Mwahera Hill, overlooking site HfJw5. Informants believe this site was occupied sometime after the Giryama's late 19th century AD northward expansion, and suggest that its abandonment took place during the early 1940's. Observation of surface pottery revealed plain sherds only. No collection was made.

HfJw7 Mwahera 03
Map Sheet: 192/3
UTM Coordinates: 37M 582132 9635682
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.12 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: III
Elevation: 369 m

This site is situated on the upper, gently sloping, south face of Mwahera Hill above site HfJw6. Again, local informants believe the site to have been occupied following the Giryama's late 19th century AD expansion north. Sherds of undecorated pottery were observed in the cultivated surface, but no collection was made.

HfJw8 Mwahera 04
Map Sheet: 192/3
UTM Coordinates: 37M 582239 9635877
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.30 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: III
Elevation: 360 m

This site is situated on the gentle upper slopes of Mwahera Hill's south-east side. Local informants believe this settlement area to have been founded after the Giryama's late 19th century northern expansion. The site has been cultivated, and is presently interspersed with coconut palms. Observed surface pottery was all undecorated; no collection was made. The distribution of surface materials, with three distinct areas of concentration might represent several contemporary homesteads or a shifting pattern of settlement/disposal areas.

HfJw9 Mwahera 05
Map Sheet: 192/3
UTM Coordinates: 37M 581416 9636071
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.12 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Hill Top
Soil Type: US
Vegetation Zone: III
Elevation: 400 m

This site is situated on the now intensively cultivated, flat, hill top plateau of Mwahera Hill. The area is marked by a concentration of undecorated surface pottery. Local informants believe the area has been occupied since the northward expansion of the Giryama in the late 19th century AD. No surface collection was made.

HfJw10 Boyani
Map Sheet: 192/3
UTM Coordinates: 37M 579140 9638540
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.09 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: III
Elevation: 340 m

Situated on a south-facing slope, this site was covered by thick bush and grass reducing surface visibility. The area has been previously cultivated, and is locally known as '*Mwambires Boma*'. Oral traditions recall site to have been occupied relatively recently following northwards movement of Giryama. Materials included undecorated sherds of pottery. No surface collection was made.

HfJw11 Sita
Map Sheet: 192/3
UTM Coordinates: 37M 579800 9638500
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open settlement
Area: c. 0.25 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: III
Elevation: 340 m

Situated on a north-facing hill-slope, this site was cleared ready for cultivation providing excellent surface visibility. Oral traditions recall site to have been occupied relatively recently following northwards movement of Giryama. Materials included undecorated sherds of pottery. No surface collection was made.

HfJw12 Mwambire
Map Sheet: 192/3
UTM Coordinates: 37M 580500 9638480
Period: Unknown
Ceramic Tradition: None
Function: Sacred Grove
Area: c. 0.04 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Valley
Soil Type: US
Vegetation Zone: III
Elevation: 280 m

Situated in a rock shelter at the east-facing head of a valley marking a natural fault line between Mwahera and Mwangea Hills. A seasonal stream runs along the base of this valley, but is said to be increasingly less reliable since deforestation of the Mwahera and Mwangea slopes. Dense vegetation along valley reduced surface visibilty to track ways and small clearing below rock shelter. No surface materials were observed, but this site is locally significant as a Sacred Grove.

HfJw13 Mbongo Konde
Map Sheet: 192/3
UTM Coordinates: 37M 580131 9635390
Period: (1000–1500 AD), post 1500 AD
Ceramic Tradition: (Late TT/TIW), Plain Ware
Function: open settlement
Area: c. 2.25 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Flat plain
Soil Type: HX2
Vegetation Zone: III
Elevation: 160 m

Situated on the flat Kisiwani plain, west of Mwahera Hill. In the past, this area has been cleared for cultivation, but presently is under secondary bush/grass, reducing surface visibility. Local oral tradition recalls site to have been one of five settlement areas occupied by Mijikenda on their southward migration from Shungwaya. The site is rich in surface materials, a single sherd with LTT/TIW incised decoration was recorded, but the majority of sherds observed were undecorated. No surface collection was made.

HfJw14 Thuva Kikweo
Map Sheet: 192/3
UTM Coordinates: 37M 580190 9635070
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open settlement
Area: c. 0.30 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Flat plain
Soil Type: HX2
Vegetation Zone: III
Elevation: 150 m

Situated on the flat, Kisiwani plain, west of Mwahera Hill. In the past, this area has been cleared for cultivation, but presently is under secondary bush/grass, reducing surface visibility. Local oral tradition recalls site to have been one of five settlement areas occupied by Mijikenda on their southward migration from Shungwaya. Observed surface materials included undecorated sherds of pottery. No surface collection was made.

HfJw15 Ngala Mboe
Map Sheet: 192/3
UTM Coordinates: 37M 580280 9633950
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open settlement
Area: c. 0.36 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Flat plain
Soil Type: HX2
Vegetation Zone: III
Elevation: 130 m

Situated on the flat, Kisiwani plain, west of Mwahera Hill. In the past, this area has been cleared for cultivation, but presently is under secondary bush/grass, reducing surface visibility. Local oral tradition recalls site to have been one of five settlement areas occupied by Mijikenda on their southward migration from Shungwaya. Observed surface materials included undecorated sherds of pottery. No surface collection was made.

HfJw16 Ndegwe Kandu
Map Sheet: 192/3
UTM Coordinates: 37M 580660 9633590
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open settlement
Area: c. 0.90 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Flat plain
Soil Type: HX2
Vegetation Zone: III
Elevation: 135 m

Situated on the flat, Kisiwani plain, west of Mwahera Hill. The site is marked by several rectangular clay house platforms. Local oral tradition recalls site to have been one of five settlement areas occupied by Mijikenda on their southward migration from Shungwaya. The site was believed to have been occupied up to the 1920's. Observed surface materials included undecorated sherds of pottery. No surface collection was made.

HfJw18 Mwangea 01
Map Sheet: 192/3
UTM Coordinates: 37M 579707 9639536
Period: 100 BC - 600 AD
Ceramic Tradition: Kwale Ware

Function: open settlement
Area: c. 0.12 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: III
Elevation: 440 m

Situated on a south-west facing hill slope of Mwangea Hill, surface ceramics eroding from track way between Primary School and Radio Tower. Surface Visibility is very poor either side of track due to heavy vegetation. A 'grab sample' was made of diagnostic sherds with characteristic Kwale Ware attributes. There was no knowledge of this site by local informants, but it is the most northerly recorded occurrence of Kwale Ware so far identified in the coastal zone.

HfJw19 Mwangea 02

Map Sheet: 192/3
UTM Coordinates: 37M 580960 9639980
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open settlement
Area: c. 0. 04 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: III
Elevation: 440 m

Situated on the east facing hill slope of Mwangea Hill, in an area of cleared cultivation. Surface ceramics are loosely scattered between field and footpath, but all were undecorated and no diagnostic sherds were evident. No local knowledge was collected about this site. No surface collection was made.

HfJw20 Mwangea 05

Map Sheet: 192/3
UTM Coordinates: 37M 578100 9635700
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.25 ha
Socio-Natural Zone: Rabai Upland
Land Form: Flat plain
Soil Type: UO
Vegetation Zone: II
Elevation: 160 m

This site was first recorded by Soper (1966). Situated on the flat, Kiswani plain west of Mwahera Hill, the site is located north of Kiswani Primary School. Referred to as a *'modern Giryama settlement'*, the site is marked by a general scatter of undecorated pottery sherds. No surface collection was made.

HfJx9 Daikunze

Map Sheet: 192/3
UTM Coordinates: 37M 583400 9635980
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.25 ha
Socio-Natural Zone: Mwangea Hill
Land Form: Flat plain
Soil Type: HX2
Vegetation Zone: III
Elevation: 240 m

This site is situated at the base of the lower eastern slopes of Mwahera Hill, between Daikunze trade centre and Primary school. A concentration of undecorated surface pottery was observed along the road cutting. No surface collection was made.

A.2. Kauma Survey Region

HgJw6 Jaribuni Drift
Map Sheet: 198/1
UTM Coordinates: 37M 582300 9601500
Period: (600-1000AD) 1000 - post1500AD
Ceramic Tradition: (TT/TIW)
Late TT/TIW – Plain Ware
Function: open-settlement
Area: c. 0.30 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 40 m

First identified by Soper (1966), this site is situated on a cultivated, north facing hill slope overlooking the River Ndzovuni. Materials collected by Soper include one sherd with TT/TIW and three sherds with late TT/TIW decorative attributes. However, the majority of surface pottery appears to be undecorated Plain Wares. Fragments of burnt daub, shell beads and cowries were also present. The site was revisited during 1996, but very few further diagnostic ceramics were identified. No local knowledge was collected about this site.

HgJw7 Kaya Kauma
Map Sheet: 198/1
UTM Coordinates: 37M 581800 9599600
Period: Unknown
Ceramic Tradition: None
Function: open-settlement
Area: c. Unknown
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Slope
Soil Type: UL
Vegetation Zone: IIb
Elevation: 80 m

Situated on a north facing hill slope overlooking the River Ndzovuni, this site is now the principle Kaya of the Kauma, following their move from Kaya Kivara (Robertson, S. and W. Luke, 1993: 6:16; Willis, J. 1996: 84). Whilst a tour around the boundaries of the Kaya was made, access within the Kaya proper was not granted. No surface materials were observed.

HgJw23 Sidzeni 01
Map Sheet: 198/1
UTM Coordinates: 37M 581625 9604321
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.25 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 60 m

This site is situated on a south facing hill slope overlooking the north bank of the River Njora. The slope rises gently to the west, adjoining the forested Thuva Hill (187 m). The area is presently cultivated. There is a high concentration of undecorated pottery sherds. No surface collection was made. Local informants believe the site was established by Kauma of the Mondare clan, following movement out from Kaya Kauma. this is said to have taken place at least three generations ago.

HgJw24 Sidzeni 02
Map Sheet: 198/1
UTM Coordinates: 37M 580979 9605323
Period: (1000-1500AD) Post 1500 AD
Ceramic Tradition: (Late TT/TIW) Plain Ware
Function: open-settlement
Area: c. 0.42 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 60 m

This site is situated north west of HgJw23 following the same contour line but on the south facing slope of tributary valley of the River Njora. The situation offers clear views across to site HgJw23 and as far south as Kaya Chivara. The site has been cultivated in the past, but was fallow bush/grassland when visited. Surface pottery was mainly undecorated. However, two sherds with late TT/TIW incised decoration were observed. No surface collection was made. Elders made no specific reference to this site. However, it is believed that this area was occupied as a subsidiary settlement of Kaya Kauma.

HgJw25 Ezamoyo

Map Sheet: 198/1
UTM Coordinates: 37M 580648 9605807
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 1.00 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 60 m

Situated on a north facing hill slope overlooking a tributary valley of the River Njora, this site extends in a linear band along the upper length of the valleys southern side. The area is presently occupied by individual homesteads interspersed with cultivated fields. Observed surface pottery was all undecorated. No surface collection was made. Elders believe that this area was occupied by three Kauma clans: Mwakupe, Mudzunza (Dzunza) and Mwazakaa (Dzakaa) wa Makogo, at a period when other groups continued to reside at Kaya Kauma. This is said to have been sometime before trade connections were established with Mazrui Arabs.

HgJw26 Rare

Map Sheet: 198/1
UTM Coordinates: 37M 582537 9605770
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.36 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Top
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 60 m

Situated south of the Ganze to Kilifi road along a valley ridge overlooking the River Njora to the south and a tributary valley to the east and north. Surface observations identified undecorated sherds of pottery in cultivated fields on the edge of contemporary homesteads to the east. No surface collection was made. Informants believe the site was occupied at a period when Kaya Kauma was still intensively settled.

HgJw27 Mtezo Mwema

Map Sheet: 198/1
UTM Coordinates: 37M 582531 9605929
Period: Unknown
Ceramic Tradition: None
Function: open-settlement
Area: c. 0.36 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Valley
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 40 m

This site is situated in a valley bottom immediately below and north of site HgJw28. The area is presently intensively inhabited. No surface materials were observed. However, informants refer to this area as being occupied at the same time as Kaya Kauma. The settlement is said to have been founded by one

Belozi Makazi, a member of the Maya Nyoka, an assimilated sub-clan of the Mongwe.

HgJw28 Koyeni
Map Sheet: 198/1
UTM Coordinates: 37M 580417 9603082
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 2.56 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Valley
Soil Type: UL
Vegetation Zone: IIb
Elevation: 60 m

Koyeni is situated on the valley ridge overlooking the River Njora to its north, and a tributary valley to its south. The site is covered in bush with occasional patches of woodland. Part of the site is presently occupied by a single homestead with a small area of associated cultivated fields. Surface observation identified a general scatter of undecorated pottery sherds, but no distinctive concentration could be identified. However, the site is marked by the foundations of at least two coral-stone house foundations and fragmentary walls, including what is said to have been a mosque. Scattered across the site were several mounds made up of coral stone rubble, possibly cleared during cultivation. Local informants referred to these mounds as being the burial places of important Arabs. A small c. 19th century (?) canon, said to have been found on the site is stored in a nearby Kauma homestead. Local information about this site suggest its function as a subsidiary trading center to the site of Mtsanganyiko (HgJx22). Informants suggested that the site originally had two foci, the main site being inhabited by Arabs, whilst to the east, a smaller area was inhabited by local Kauma.

HgJw34 Kaya Kambe (Kauma)
Map Sheet: 198/1
UTM Coordinates: 37M 581400 9598800
Period: Unknown
Ceramic Tradition: None
Function: subsidiary Kaya
Area: Unknown
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Slope
Soil Type: UL
Vegetation Zone: IIb
Elevation: 60 m

Situated on the north-west facing hill slope above the steeply cut valley of the Ndzovuni River, Kaya Kambe is a subsidiary off-shoot of Kaya Kauma (HgJw7). Informants refer to this Kaya as being established by the Kambe before they had fully split from the Kauma and established Kaya Kambe. Whilst Kambe would seem to deny this association, both the Kauma and the Kambe have traditions which closely associate themselves to the Ribe.

HgJw35 Kaya Ribe (Kauma)
Map Sheet: 198/1
UTM Coordinates: 37M 581600 959890
Period: Unknown
Ceramic Tradition: None
Function: Subsidiary Kaya
Area: Unknown
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Slope
Soil Type: UL
Vegetation Zone: IIb
Elevation: 140 m

Situated on a gentle, north facing slope overlooking, Kaya Kauma (HgJw7), Kaya Ribe, like Kaya Kambe (HgJw34) above, is seen as a subsidiary off-shoot of Kaya Kauma. According to our informant, this off-shoot was created when following a dispute amongst the Ribe, a group of young Ribe returned to Kauma to establish their own secondary Kaya.

HgJx Konjora
Map Sheet: 198/2
UTM Coordinates: 37M 587600 9605600
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: 0.04
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UT
Vegetation Zone: IIb
Elevation: 20 m

The site of Konjora is situated on a gentle, west facing hill slope, overlooking Konjora Creek. Surface observation identified sherds of undecorated pottery. No surface collection was made. Information from local elders suggest that the site was a local trade centre associated with Mazrui Arabs from Takaungu.

HgJx5 Konjora Hill
Map Sheet: 198/2
UTM Coordinates: 37M 587900 9607300
Period: LSA
Ceramic Tradition: None
Function:find spot
Area: 0.04
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 100 m

Situated on the west facing crest of Konjora Hill, this site overlooks the River Rare as it enters Konjora Creek. First identified by Soper (1966), collected materials include a stone scraper and two stone flakes. Our informant did not recall any local traditions about this area.

HgJx7 Ndzovuni 01
Map Sheet: 198/2
UTM Coordinates: 37M 583588 9601130
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.49 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Valley
Soil Type: UE2
Vegetation Zone: IIb
Elevation: 10 m

Situated along the cultivated valley floor of the Ndzovuni River, below a valley ridge on its southern side, this site is marked by a scatter of undecorated pottery sherds eroding along the line of a trackway. No surface collection was made. The site was identified by local elders who believe it was occupied whilst Mtsanganyiko (HgJx22) conducted trade, therefore presumably dateable to sometime during the 19th century AD.

HgJx8 Ndzovuni 02
Map Sheet: 198/2
UTM Coordinates: 37M 584059 9601473
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.30 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Valley
Soil Type: AA
Vegetation Zone: IIb
Elevation: 20 m

This site is situated on a slight ridge situated between the southern bank of the River Ndzovuni and a small tributary valley. Sherds of undecorated pottery are concentrated on the upper slopes of the ridge, between a copse of Baobab trees. No surface collection was made. Elders identified the area as being occupied by

Kauma who would trade with Mazrui Arabs at Mtsanganyiko (HgJx22).

HgJx9 Lutsangani
Map Sheet: 198/2
UTM Coordinates: 37M 584835 9601050
Period: Unknown
Ceramic Tradition: None
Function: open-settlement
Area: c. 0.36 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Valley
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 20 m

This site is situated on a valley ridge overlooking a tributary of the River Ndzovuni to the north-west. To the east, the land rises to 107m, before sloping down towards Kibokoni Creek below. The site was identified by local elders as a settlement of Kauma of the Makupe clan. It is believed to have been founded before trade with the Mazrui Arabs had began at Mtsanganyiko (HgJx22). However, no surface material was observed during our visit, despite fair surface visibility.

HgJx10 Sihu
Map Sheet: 198/2
UTM Coordinates: 37M 583636 9600623
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.30 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 40 m

Situated on a north facing hill slope overlooking the Ndzovuni River to the north, and tributary river valleys to the east and west, this site is currently located within the bounds of a contemporary homestead. Observation of surface material revealed undecorated pottery sherds only. Our informant recalls the site as being founded by Kauma of the Ndadare clan, sometime before the site of Mtsanganyiko (HgJx22) was established as a trade centre.

HgJx22 Mtsanganyiko
Map Sheet: 198/2
UTM Coordinates: 37M 584483 9603371
Period: Post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 1.69 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Top
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 20 m

Referred to by 19th century textual sources, Mtsanganyiko formed an important commercial focus, along with Takaungu and Konjora, between the Mijikenda hinterland communities and Mazrui Arab traders of the coast. The site is situated on a hill top overlooking the estuary of the Ndzovuni River, where it enters Kibokoni Creek. The observed settlement area is large, extending westwards along the hill top from the mouth of the estuary, bounded by the rivers Ndzovuni to the south and Njora to the north. The area is presently under secondary bush/grass with scattered tree cover. Observed surface materials included imported European glass and Chinese and European porcelains. Local surface pottery was undecorated. No surface collection was made.

A.3. Mwakuhenga Survey Region

HgJw1 Pango ya Saidi
Map Sheet: 198/1
UTM Coordinates: 37M 581800 9594000
Period: Unknown
Ceramic Tradition: None
Function: rock shelter
Area: c. 0.16 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Slope
Soil Type: UL
Vegetation Zone: IIa
Elevation: 160 m

Situated on an east facing hill slope, this rock shelter formed in the limestone of the Dzitsoni Upland was first recorded by Soper (1966; 1975). No surface materials have been observed.

HgJw2 Mzungu wa Iwe
Map Sheet: 198/1
UTM Coordinates: 37M 582100 9594700
Period: LSA (intermittent to post 1500 AD)
Ceramic Tradition: Late TT/TIW - Plain Ware
Function: open-settlement
Area: c. 0.16 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Slope
Soil Type: UL
Vegetation Zone: IIa
Elevation: 140 m

Recorded by Soper (1966; 1975) this limestone rock shelter is situated on an east facing slope over looking the Lutsangani Upland. An evaluation trench, excavated by Soper identified two main stratigraphic horizons to a depth of 0.75m, during which LSA microliths, sea shells and bones of mostly small-sized wild fauna were recovered. A total of four decorated Late TT/TIW and 12 undecorated pottery sherds were recovered from both strata suggesting intermittent reuse into the present. The site presently forms a sacred foci for local Kauma.

HgJw3 Mwanzumari (Sinseme)
Map Sheet: 198/1
UTM Coordinates: 37M 581706 9591815
Period: LSA (intermittent to post 1500 AD)
Ceramic Tradition: (Kwale Ware) TT/TIW - Late TT/TIW - Plain Ware
Function: rock shelter
Area: c. 0.64 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Slope
Soil Type: UL
Vegetation Zone: IIa
Elevation: 120 m

Situated on an east facing hill slope, this limestone rock shelter, forming three chambers, was first recorded by Soper (1966; 1975). Soper's excavation demonstrated the existence of three main stratigraphic horizons, to a depth of 0.95m. Finds included LSA microliths, marine shells and bones from mainly small-sized wild fauna. In addition, a fragment of iron, a single sherd with Kwale Ware like decorative attributes, and several sherds of TT/TIW, Late TT/TIW and Plain Ware pottery all suggest continued, if intermittent use of this site. Outside the rock shelter, extending down the slope, is a concentration of undecorated surface ceramics. Contemporary local Chonyi inhabitants continue to ascribe a ritual function to the rock shelter.

HgJw5 Mvuno
Map Sheet: 198/1
UTM Coordinates: 37M 582400 9594700
Period: MSA
Ceramic Tradition: None
Function: rock shelter
Area: c. 0.16 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Slope
Soil Type: UL

Vegetation Zone: IIa
Elevation: 110 m

Situated on an east facing hill slope, immediately below Mzungu wa Iwe (HgJw2), this limestone rock shelter was visited by Soper (1966; 1975). Surface finds include a MSA disc core, and several broken flake points.

HgJw11 Kitsoeni Ngamani
Map Sheet: 198/1
UTM Coordinates: 37M 583283 9591128
Period: LSA , reoccupied post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 1.32 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Top
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 120 m

This site is situated on a low hill top rising above the surrounding Lutsangani Uplands. The site has been intensively cultivated. A total six LSA stone tools were collected from the deeply ploughed fields. In addition, the whole hill top and surrounding slopes have a concentrated scatter of undecorated pottery sherds, suggesting later post-1500 AD reoccupation. A grab sample of diagnostic surface materials was made.

HgJw21 Bundacho
Map Sheet: 198/1
UTM Coordinates: 37M 580893 9590124
Period: Unknown
Ceramic Tradition: None
Function: rock shelter
Area: c. 1.00 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Valley
Soil Type: UL
Vegetation Zone: IIa
Elevation: 130 m

This site is situated in a valley floor fed by a seasonal tributary of the River Ngombeni, 600m south of Kitsoeni trade centre. The site constitutes a group of four rock shelters formed in a south facing outcrop of limestone. No surface materials were observed. However, the site is believed to have been occupied by the Buta, a sub-clan of the Mongwe clan of Chonyi, during their migration from Shungwaya to Kaya Chonyi.

HgJw33 Kaya Starehe
Map Sheet: 198/1
UTM Coordinates: 37M 580300 9595700
Period: Unknown
Ceramic Tradition: None
Function: Kaya
Area: unknown
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Top
Soil Type: UL
Vegetation Zone: IIa
Elevation: 150 m

This Kauma Kaya is situated on a forested hill top, overlooking Vinangoni rock shelter to the east, some 1km distance north of Mbuzi trade centre. Recorded by Robertson and Luke (1993: 6:16) and Willis (1996: 85) the Kaya is believed to have been established by Kauma of the Dzakaa and Dzundza clans from Kaya Chivara. Access into the Kaya was not granted by elders.

HgJw Mbudze
Map Sheet: 198/1
UTM Coordinates: 37M 581000 9592700
Period: Unknown
Ceramic Tradition: None
Function: rock shelter
Area: Unknown
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Slope

Soil Type: UL
Vegetation Zone: IIa
Elevation: 170 m

Recorded by Soper (1966; 1975), this limestone rock shelter is situated on the east facing hill slope overlooking the Lutsangani Uplands, between the sites of Pango ya Saidi (HgJw1) to the north, and Mwanzumari (HgJw3) to the south. No surface materials were observed.

HgJw Vinangoni
Map Sheet: 198/1
UTM Coordinates: 37M 581100 9595400
Period: Unknown
Ceramic Tradition: None
Function: rock shelter
Area: Unknown
Socio-Natural Zone: Dzitsoni Upland
Land Form: Valley
Soil Type: UL
Vegetation Zone: IIa
Elevation: 160 m

This limestone rock shelter is situated on a hill slope immediately below Kaya Starehe (HgJw33), some 300 m west of the Dzitsoni to Jaribuni road. The site was recorded by Soper (1966; 1975). No surface materials were observed.

HgJx6 Mitangoni 02
Map Sheet: 198/2
UTM Coordinates: 37M 583491 9593622
Period: (LSA) 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: c. 0.56 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 60 m

Situated on a east facing hill slope overlooking a seasonal river valley feeding Kilifi Creek, this site is marked by a concentration of late TT/TIW decorated and undecorated ceramics. A grab sample of diagnostic sherds was made. The site is believed to have been occupied some seven generations ago, by a group of Kauma who had left Mitangoni 01 (HgJx21). The site is divided into two foci, an area presently under cultivation, believed by our informant to have been the area of settlement (this is attested by the distribution of surface materials) and a burial area, protected by a grove of trees, which is still in use today. A single LSA shale discoidal core was also recovered from this site.

HgJx11 Mwakuhenga 01
Map Sheet: 198/2
UTM Coordinates: 37M 590210 9591442
Period: post 1500 AD (modern)
Ceramic Tradition: Plain Ware
Function: burial area
Area: c. 0.04 ha
Socio-Natural Zone: Low Coastal Plain
Land Form: Valley
Soil Type: P2E
Vegetation Zone: III
Elevation: 20 m

Situated on the lower east facing slopes of the Sinawe-Mwakuhenga river valley, this site is a reputed local Chonyi burial ground. A few undecorated sherds of surface pottery were observed, but the area has not been intensively settled for any length of time. It is likely that this site dates to the Mwakuhenga resettlement scheme, undertaken during 1962. No surface collection was made.

HgJx12 Mwakuhenga 02
Map Sheet: 198/2
UTM Coordinates: 37M 589718 9591421
Period: post 1500 AD
Ceramic Tradition: Plain Ware

Function: open-settlement
Area: c. 0.49 ha
Socio-Natural Zone: Low Coastal Plain
Land Form: Hill Slope
Soil Type: P2E
Vegetation Zone: III
Elevation: 40 m

Situated on the upper east facing slopes of the Sinawe-Mwakuhenga river valley, this site has a high concentration of undecorated ceramics including late 19th century imported wares. No surface collection was made. The site is reputedly located within the grounds of an extensive Arab slave plantation. Our informant also recalled seeing sherds of decorated pottery during excavation of a rubbish pit, which through his description, would suggest that an earlier late TT/TIW phase of occupation might well be present.

HgJx13 Mwakuhenga 03
Map Sheet: 198/2
UTM Coordinates: 37M 589521 9591284
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.30 ha
Socio-Natural Zone: Low Coastal Plain
Land Form: Valley
Soil Type: P2E
Vegetation Zone: IIa
Elevation: 20 m

Situated on the floor of a tributary valley of the Sinawe River, this site forms a poorly defined surface concentration of undecorated pottery sherds. No surface collection was made. Our local informant was unable to give any information about this settlement area.

HgJx14 Mwakuhenga 04
Map Sheet: 198/2
UTM Coordinates: 37M 588710 9591649
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.30 ha
Socio-Natural Zone: Low Coastal Plain
Land Form: Flat plain
Soil Type: P2E
Vegetation Zone: IIa
Elevation: 40 m

This site, situated on the flat plain above the Mwakuhenga and Sinawe river valleys, some 100m west of Mwakuhenga 05 (HgJx15), forms a well defined surface concentration of undecorated pottery sherds. Unconfirmed reports by the landowner recall seeing pottery up to 0.5m below ground level, with typical Late TT/TIW decorative attributes. No surface collection was made.

HgJx15 Mwakuhenga 05
Map Sheet: 198/2
UTM Coordinates: 37M 588810 9591624
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.30 ha
Socio-Natural Zone: Low Coastal Plain
Land Form: Flat plain
Soil Type: P2E
Vegetation Zone: IIa
Elevation: 40 m

Situated some 100m west of Mwakuhenga 04 (HgJx14), this site is marked by a concentration of undecorated surface pottery sherds. No surface collection was made.

HgJx16 Mwakuhenga 06
Map Sheet: 198/2
UTM Coordinates: 37M 588420 9591226
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement

Area: c. 0.12 ha
Socio-Natural Zone: Low Coastal Plain
Land Form: Valley
Soil Type: AA
Vegetation Zone: IIa
Elevation: 40 m

Situated on the floor of the Mwakuhenga River valley, this site forms an extensive scatter of undecorated surface pottery. No surface collection was made. However, a single sherd with vertical incised neck decoration typical of Late TT/TIW was identified. Local information suggests that this site was occupied by Chonyi who had moved here directly from Kaya Chonyi.

HgJx17 Mwakuhenga 07
Map Sheet: 198/2
UTM Coordinates: 37M 590600 9590700
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.59 ha
Socio-Natural Zone: Low Coastal Plain
Land Form: Hill Top
Soil Type: P2E
Vegetation Zone: III
Elevation: 40 m

This site, situated off the main Kilifi – Mombasa road, 1km south of the Sinawe river crossing, is believed to have been occupied by a group of Chonyi following their movement from Cha Simba to Mkwajuni. Presently occupied, undecorated surface pottery was observed within the village and surrounding cultivated fields. No surface collection was made.

HgJx18 Mwakuhenga 08
Map Sheet: 198/2
UTM Coordinates: 37M 590232 9589840
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.06 ha
Socio-Natural Zone: Low Coastal Plain
Land Form: Valley
Soil Type: AA
Vegetation Zone: III
Elevation: 10 m

This site is situated on a track way following the valley ridge to Makata primary school, and overlooks a tributary valley of the River Mtoni to the south. The site is marked by a restricted concentration of undecorated surface sherds. No surface collection was made.

HgJx19 Makata
Map Sheet: 198/2
UTM Coordinates: 37M 589090 9589490
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: Sacred Grove
Area: c. 0.36 ha
Socio-Natural Zone: Pingilikani Upland
Land Form: Hill Top
Soil Type: UE1
Vegetation Zone: III
Elevation: 80 m

Situated in the grounds of Makata Primary school, this site marked by a loose concentration of undecorated surface pottery, overlooks the Mwakuhenga River valley to the west. The site is held to have been a sacred grove by local Chonyi elders, its focus centred on a very old looking Baobab tree. No surface collection was made.

HgJx20 Dindiri
Map Sheet: 198/2
UTM Coordinates: 37M 588097 9586031
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.04 ha
Socio-Natural Zone: Pingilikani Upland

Land Form: Hill Slope
Soil Type: UE1
Vegetation Zone: III
Elevation: 90 m

This site has been occupied intensively since 1962, following the implementation of a local resettlement scheme. However, oral traditions of the Chonyi recall Dindiri as being an important settlement focus sometime earlier following the supposed expansion from Kaya Chonyi. Confused by modern settlement debris, it proved difficult to identify specific evidence for this earlier stratum of settlement. Observed surface materials were restricted to undecorated pottery sherds only. No surface collection was made.

HgJx21 Mitangoni 01
Map Sheet: 198/2
UTM Coordinates: 37M 584910 9594287
Period: (1000-1500 AD) post 1500 AD
Ceramic Tradition: (Late TT/TIW) Plain Ware
Function: open-settlement
Area: c. 0.20 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 60 m

Situated on a gently sloping, west facing hill slope above seasonal river tributary, 2km north west of Mitangoni trade centre, this site is marked by a concentration of mainly undecorated surface pottery. Several sherds of imported pottery and glass, and a single sherd of possibly Late TT/TIW affinity were also observed. A grab sample of diagnostic materials was collected. The site is believed to have been occupied by Kauma of the Dzunza clan, from Kaya Kauma. They are believed to have settled here only a short time, before moving to Mitangoni 02 (HgJx6) some seven generations ago.

HhJx6 Mkomani
Map Sheet: 198/4
UTM Coordinates: 37M 588546 9584701
Period: (1000-1500 AD) post 1500 AD
Ceramic Tradition: (Late TT/TIW) Plain Ware
Function: open-settlement
Area: c. 0.36 ha
Socio-Natural Zone: Low Coastal Plain
Land Form: Valley
Soil Type: AA
Vegetation Zone: III
Elevation: 60 m

Situated on the lower valley slopes overlooking the River Vimbi, this site has a scatter of undecorated and decorated sherds eroding from a foot path leading from the modern Mkomani trade centre down to a ford crossing the Vimbi river. Chonyi elders from Mkomani associate the foundation of this settlement to the establishment of trade links with Takuanga. A grab sample of diagnostic surface materials was collected.

A.4. Kinarani Survey Region

HgJw12 Mtsengo 01
Map Sheet: 198/1
UTM Coordinates: 37M 568940 9588320
Period: (600-1000 AD) 1000-1500 AD
Ceramic Tradition: (TT/TIW) Late TT/TIW
Function: open-settlement
Area: c. 7.56 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Valley
Soil Type: USK
Vegetation Zone: III
Elevation: 280 m

Mtsengo 01 is situated in a gently sloping valley bottom, 1km west of Mtsengo trade centre. The valley is dissected by two seasonal streams running northwards and southwards respectively, both of which form part of the River Ndzovuni's water catchment area. The site is partially under cultivation, partly fallow. Surface materials are seen to concentrate along the valleys north and east floor. A systematic collection of surface materials was made. Surface finds suggest a Late TT/TIW occupation. However, excavation of three trenches revealed well stratified occupation horizons up to a depth of 1.75m, with TT/TIW ceramics suggesting initial occupation sometime during the middle iron-working, farming period. Excavation contradicts local oral traditions which recalls Mtsengo as being a relatively short-term pre-Kaya settlement, occupied during the northern Mijikenda's migration from Shungwaya. Indeed the observed distribution of surface materials would suggest a site size comparable to that of some contemporary coastal towns.

HgJw13 Mtsengo 02
Map Sheet: 198/1
UTM Coordinates: 37M 569500 9589944
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.64 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: USK
Vegetation Zone: III
Elevation: 280 m

Situated on a gentle west facing hill slope, 1.5km north-west of Mtsengo trade centre, this site is believed by local Giryama informants to have been briefly occupied by a group of Kauma, following their split from the Ribe at Mtsengo 01 (HgJw12). The site has a relatively low concentration of undecorated surface pottery, despite regular cultivation. No surface collection was made.

HgJw14 Mtsengo 03
Map Sheet: 198/1
UTM Coordinates: 37M 569713 9589513
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.12 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: USK
Vegetation Zone: III
Elevation: 280 m

Situated on a gradual south-west facing hill slope, 1km north-west of Mtsengo trade centre, this site is believed by local Giryama informants to have been occupied by the Ribe, following their movement away from Mtsengo 01 (HgJw12). The site has a general scatter of undecorated pottery sherds. No surface collection was made.

HgJw15 Kwa Demu 01
Map Sheet: 198/1
UTM Coordinates: 37M 566420 9591415
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.30 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: USK
Vegetation Zone: III
Elevation: 280 m
Situated on the southern side of a flat hill top plateau, overlooking a seasonal tributary river valley of the Ndzovuni, the site forms a concentration of undecorated surface pottery eroding from the playing field and garden of Kwa Demu primary school. No collection of surface material was made. Oral traditions refer to this area as being occupied by the northern Mijikenda following their movement from Shungwaya to Mwangea Hill. Indeed, the area

does appear to have been the focus of a number of contemporary settlement foci (see HgJw16 and HgJw 17), with Kwa Demu 01 topographically being the most prominent.

HgJw16 Kwa Demu 02

Map Sheet: 198/1
UTM Coordinates: 37M 566369 9591030
Period: 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: c. 0.20 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Valley
Soil Type: AA
Vegetation Zone: III
Elevation: 270 m

This site is situated below Kwa Demu 01 (HgJw15), on the lower south facing slopes of a tributary river valley of the Ndzovuni. The site has been heavily cultivated, exposing a high concentration of Late TT/TIW decorated ceramics. A grab sample of surface materials was collected. It is very likely that this site is part of Kwa Demu 01.

HgJw17 Kwa Demu 03

Map Sheet: 198/1
UTM Coordinates: 37M 567012 9591325
Period: (1000-1500 AD) post 1500 AD
Ceramic Tradition: (Late TT/TIW) Plain Ware
Function: open-settlement
Area: c. 0.12 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: USK
Vegetation Zone: III
Elevation: 260 m

Situated some 700m east of Kwa Demu 01 (HgJw15), this site, marked by a prominent cluster of Baobab trees, is concentrated on a gentle east facing slope overlooking a tributary valley of the River Ndzovuni. Partially cultivated, and partly under bush, surface materials included two sherds with Late TT/TIW decoration, a general scatter of undecorated pottery, and considerable amounts of burnt daub. Examination of an exposed section suggests that there are two main occupation horizons extending to a depth of 0.20m. No surface collection was made.

HgJw18 Kinarani 01

Map Sheet: 198/1
UTM Coordinates: 37M 564019 9586666
Period: 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: c. 0.20 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Valley
Soil Type: USK
Vegetation Zone: III
Elevation: 320 m

Situated on the gentle slope of a west facing valley side, this site has been heavily cultivated. Scattered over the site are a number of clearance cairns made up of large blocks of burnt daub and Late TT/TIW decorated pottery. Despite this, there is still a heavy concentration of surface materials spread across the cultivated area, suggesting that new materials are being disturbed each cultivation season. A grab sample of diagnostic surface pottery was collected. Oral traditions recall this site as being occupied by the Giryama, during their movement between Kwa Demu (HgJw15-17) and Murikwa (HhJw31), before their final settlement at Kaya Fungo.

HgJw19 Digo Mbai

Map Sheet: 198/1
UTM Coordinates: 37M 568610 9591064
Period: post 1500 AD
Ceramic Tradition: Plain Ware

Function: open-settlement
Area: c. 0.30 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: USK
Vegetation Zone: III
Elevation: 240 m

This site, located 1.5km east of Kwa Demu 03, on the west facing slope of Kithengwani Ridge above the Ndzovuni tributary valley, is believed to have been occupied by the Ribe on their way from Mtsengo 03 (HgJw14) to Kaya Chivara. Surface observation identified a relatively low density of undecorated pottery. No surface collection was made.

HgJw20 Kithengwani
Map Sheet: 198/1
UTM Coordinates: 37M 569292 9591541
Period: Unknown
Ceramic Tradition: None
Function: open-settlement
Area: Unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: USK
Vegetation Zone: III
Elevation: 260 m

Situated on the west facing slopes of Kithengwani Ridge, overlooking the site of Digo Mbai (HgJw19), this site is also believed to have been a settlement area of the Ribe. However, no surface materials were observed on the cultivated slopes, although past settlement is perhaps hinted at by the presence of a grove of Baobab trees.

HgJw22 Kinarani 02
Map Sheet: 198/1
UTM Coordinates: 37M 564554 9588345
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.42 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: USK
Vegetation Zone: III
Elevation: 320 m

This site is situated 600m north-east of Kinarani trade centre, along the main Kinarani to Kwa Demu road. A concentration of surface materials including undecorated pottery, daub, and frequent charcoal and bone fragments was noted along the road cutting itself. No surface collection was made. No local knowledge was available for this site. During a later revisit to this site it was noted that the road surface had been newly covered over with murram, though materials could still be seen to extend either side of the road itself.

HhJw31 Murikwa
Map Sheet: 198/1
UTM Coordinates: 37M 562953 9583327
Period: 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: c. 1.00 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: USK
Vegetation Zone: II
Elevation: 220 m

Situated on a flat hill top plateau, gently sloping to the north-east, this concentration of Late TT/TIW pottery and daub is found on the north west outskirts of Mwijo trade centre, either side of the Kinarani to Vishakani road. No surface collection was made. Traditionally, Murikwa is said to have been settled by Giryama who had moved both from Kwa Demu and Mtsengo, following attacks by Galla (Oromo). The area is said to have been occupied only temporally before the Giryama were again forced to move, this time into Kaya Fungo. However, in situ daub observed in a road cutting suggestive of good stratigraphic preservation, and the intensity and extent of surface materials would point towards this site having a long-term settlement history comparable to that observed at Mtsengo 01 (HgJw12).

A.5. Jibana Survey Region

HgJw4 Cha Simba (Mawe-Meeru)
Map Sheet: 198/3
UTM Coordinates: 37M 577400 9586500
Period: LSA (intermittently to post 1500 AD)
Ceramic Tradition: Plain Ware
Function: rock shelter
Area: unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Valley
Soil Type: UL
Vegetation Zone: V
Elevation: 200 m

This limestone rockshelter, situated in the forested upper valley of the River Maweni, was excavated by Soper (1966; 1975). A total of ten stratified horizons were recognised, extending to a depth of 2.05m. Finds included LSA quartz microliths and the bones of mainly small-sized wild fauna. In addition, a small sample of nine undecorated and one decorated pottery sherd were recovered from the upper two horizons, suggesting intermittent later re-use. Contemporary Chonyi communities view the rock shelter and surrounding forest as a sacred foci (Robertson, S. 1987; Robertson S. and Q. Luke, 1993). Interviews conducted during 1997 identified Cha Simba as being reoccupied following the expansion from Kaya Chonyi, by the Chakwe, a sub-clan of the Mongwe Chonyi.

HhJw9 Bandara Salama
Map Sheet: 198/3
UTM Coordinates: 37M 579025 9582775
Period: LSA (post 1500 AD)
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.72 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Top
Soil Type: UL
Vegetation Zone: V
Elevation: 120 m

Situated on a south-east facing hill slope overlooking the River Mtomkuu valley system, this site is located within the grounds of Kidutani Primary school. Observed surface materials included undecorated pottery sherds and six LSA shale stone-tools, including five flakes and one scraper. A grab sample of diagnostic materials was collected.

HhJw10 Kwa Kipoko
Map Sheet: 198/3
UTM Coordinates: 37M 576509 9585378
Period: 100 BC – 600 AD
Ceramic Tradition: Kwale Ware
Function: open-settlement
Area: c. 3.0 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 200 m

This significant Kwale Ware site is situated on a gently sloping hill slope, leading south towards a tributary valley of the River Mtomkuu. Surface materials are concentrated on the west side of the Cha Simba to Mwarakaya road, in the compound of a homestead. Examination of rubbish pit sections suggested occupation horizons extend to a depth of 0.5m, with good stratigraphic preservation. Materials included decorated Kwale Ware pottery sherds, and frequent large fragments of charcoal. A grab sample of materials was collected. Further detailed survey, perhaps with excavation, is of high priority.

HhJw11 Mgombani 01

Map Sheet: 198/3
UTM Coordinates: 37M 575246 9575585
Period: 600–1000 AD
Ceramic Tradition: TT/TIW
Function: open-settlement
Area: c. 1.96 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Slope
Soil Type: UL
Vegetation Zone: V
Elevation: 110 m

Situated either side of the Jibana to Kambe road, immediately below the forested, east facing hill slopes of Kaya Jibana (HhJw80), and overlooking the River Mtomkuu vallley Mgombani 01 is located approximately 1.5km south of Jibana Health Centre. Marked by a surface distribution of TT/TIW decorated ceramics, the site is likely to be a later extension of the Kwale Ware - TT/TIW site of Mgombani 02 (HhJw12), located some 200m to the south. Examination of a section exposed by the digging of a rubbish pit revealed at least four stratified horizons extending to a depth of 1.03m. Local traditions believe that this settlement was founded by the Ndaza, a sub-clan of the Mongwe Jibana. Spear's (1978: 93) informants, referred to 'Magombani' as being occupied by Swahili from Mombasa, who traded with local Jibana during the 19th century AD. Both traditions likely refer to the latest phase of settlement history, which continues into the present day settlement of Mgombani.

HhJw12 Mgombani 02

Map Sheet: 198/3
UTM Coordinates: 37M 575334 9575480
Period: (LSA) 100 BC – 1000 AD
Ceramic Tradition: Kwale ware – TT/TIW
Function: open-settlement
Area: c. 0.90 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Slope
Soil Type: UL
Vegetation Zone: V
Elevation: 110 m

Situated 200m south of Mgombani 01 (HhJw11), this site forms the earliest focus of the later extended Mgombani settlement complex. Surface observation identified both Kwale Ware and TT/TIW ceramics, as well as direct evidence for on site production of iron. Excavation identified stratified deposits extending to a depth of 1.30m. Later analysis of ceramics demonstrates a gradual transition between Kwale Ware and TT/TIW attributes suggesting a degree of cultural continuity between the early and middle iron-working, farming periods. In addition, an earlier phase of LSA activity was identified above the natural subsoil.

HhJw13 Mwanawije

Map Sheet: 198/3
UTM Coordinates: 37M 576654 9572945
Period: 100 BC – 1000 AD
Ceramic Tradition: Kwale Ware – TT/TIW
Function: open-settlement
Area: c. 0.64 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Top
Soil Type: UE2
Vegetation Zone: IIb
Elevation: 80 m

Situated on a narrow ridge of remnant Magarini and Kilindini sands overlooking the surrounding valleys of the Lutsangani Uplands, this site is located within a modern cluster of homesteads reached along a track way running between Pangani and Kidutani trade centres. Observation of surface materials identified ceramics with both Kwale Ware and TT/TIW decorative attributes. A grab sample of diagnostic sherds was made. The site appears to have no known local historical significance.

HhJw14 Mahunduni 01
Map Sheet: 198/3
UTM Coordinates: 37M 570608 9571831
Period: 100 BC – 1000 AD
Ceramic Tradition: Kwale Ware – TT/TIW
Function: open-settlement
Area: c. 1.69 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 200 m

Located within the grounds of the Ribe Chief's Camp, the site is situated on an east facing hill slope, overlooking the Mbuzini River valley. Sherds of Kwale Ware and TT/TIW pottery are visible eroding from the drive of the compound. A grab sample of diagnostic surface materials was made, including a rounded quartz pebble and two lumps of iron slag. Oral traditions suggest that this site was occupied by the Dzombo and Kizango, both sub-clans of the Dzombo Ribe, before the establishment of Kaya Ribe.

HhJw15 Mwandeje
Map Sheet: 198/3
UTM Coordinates: 37M 575252 9574211
Period: (LSA) (100 BC– 600 AD) 600-1000 AD
Ceramic Tradition: (LSA) (Kwale Ware) TT/TIW
Function: open-settlement
Area: c. 1.44 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Valley
Soil Type: HX1
Vegetation Zone: V
Elevation: 80 m

Situated immediately below the Dzitsoni Upland, on a low valley spur between the River Lwandani and adjoining tributary, this site has a high concentration of TT/TIW ceramics. The western side of the site is partially eroded by the conjunction of the two rivers. Examination of the exposed banks revealed up to two main stratified horizons reaching a depth of 0.5m. A grab sample of surface materials was made, during which a single sherd of Kwale Ware, and a LSA flake were also collected. The site appears to have no known local historical significance.

HhJw16 Mwanzai
Map Sheet: 198/3
UTM Coordinates: 37M 576351 9576756
Period: 600 – 1000 AD
Ceramic Tradition: TT/TIW
Function: open-settlement
Area: c. 1.00 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Valley
Soil Type: UL
Vegetation Zone: V
Elevation: 100 m

Situated on the southern bank of a tributary stream of the River Mtomkuu, 100m east of Jibana Health Centre. The site is on the flat valley floor, overlooking a slight slope down to the river, which can be crossed via a nearby ford. Sherds of TT/TIW pottery are seen to be eroding from a footpath down to the ford. A grab sample of diagnostic sherds was collected. The site appears to have no known local historical significance.

HhJw18 Mwembetayari
Map Sheet: 198/3
UTM Coordinates: 37M 574894 9574820
Period: (100 BC – 600 AD) post 1500 AD
Ceramic Tradition: (Kwale Ware) Plain Ware
Function: open-settlement
Area: c. 0.30 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 110 m

Located either side of the Jibana to Kambe road, this site is situated below the forested, south facing slopes of Kaya Jibana. The site is covered by a general scatter of undecorated surface pottery. However, two sherds of decorated Kwale Ware pottery were also found either side of the road cutting. A grab sample of diagnostic pottery sherds was made. Oral traditions recall Mwembetayari to have been occupied by the Ndaza sub-clan of the Mongwe Jibana, following their movement out from Kaya Jibana.

HhJw24 Mahunduni 02
Map Sheet: 198/3
UTM Coordinates: 37M 570252 9572162
Period: 600–1000 AD
Ceramic Tradition: TT/TIW
Function: open-settlement
Area: c. 0.16 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 200 m

Situated on a west facing hill slope overlooking the Mleji river valley below the Ribe Chief's Camp. A concentration of TT/TIW pottery is seen eroding from a foot track leading down to the river. Thick bush restricted surface visibility either side. A grab sample of diagnostic pottery sherds was made. This site appears to have no known local historical significance.

HhJw25 Kaya Kwale (Jibana)
Map Sheet: 198/3
UTM Coordinates: 37M 571081 9576412
Period: (600–1000 AD) 1000-1500 AD
Ceramic Tradition: (TT/TIW) Late TT/TIW
Function: open-settlement
Area: c. 4.0 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 220 m

Referred to by Willis (1996: 90), this Jibana Kaya is situated on a hill top spur, overlooking the Lwandani river valley, which traditionally marks the territorial boundary between the Jibana and Kambe. The site has frequent Late TT/TIW pottery sherds exposed in the cultivated fields. In addition, a small sample of TT/TIW decorated sherds were collected near the northern boundaries of the site (in the homestead of Mzee Marsha). A grab sample of diagnostic surface materials was collected, including one shell and four glass beads, and several fragments of tuyere. Oral traditions suggest that this site was occupied by the Jibana during their migration from Shungwaya, before Kaya Jibana had been established. Informants associated this occupation with four Jibana clans: the Muremere, Muwatsuma, Vumbi and Mwayura.

HhJw26 Mbungoni
Map Sheet: 198/3
UTM Coordinates: 37M 571041 9573334
Period: (LSA) 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: c. 0.81 ha
Socio-Natural Zone: Kaloleni Upland

Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 200 m

Situated on the same hill ridge as Mahunduni 01 (HhJw14) and Mahunduni 02 (HhJw24), the site is located north of Kambe Chief's Camp. A wide scatter of Late TT/TIW and undecorated sherds are visible along eroded foot track. In addition, a LSA shale core and shale flake were noted. A grab sample of diagnostic surface materials was made. Oral traditions suggest that this site was occupied by the Dzua, a sub-clan of the Dzakaa Kambe, following their expansion out form Kaya Kambe.

HhJw27 Bondora
Map Sheet: 198/3
UTM Coordinates: 37M 570197 9574301
Period: 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: c. 0.30 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 200 m

This site is situated west of the main Kaloleni to Mwazeras road, near the junction to Kambe. The majority of sherds appear to be Late TT/TIW. However, a number of undecorated sherds would appear to have a fabric similar to Kwale Ware sherds collected from Mahunduni 01 (HhJw14). A grab sample of diagnistic sherds was made. Oral traditions suggest that this site was occupied by several groups of Kambe, following their expansion from Kaya Kambe. These include the Mwadena and Mwatoya, both sub-clans of the Dzunza Kambe, and the Mwarome and Mwaringa, both sub-clans of the Kalonzo Kambe.

HhJw28 Walea
Map Sheet: 198/3
UTM Coordinates: 37M 570301 9577587
Period: 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: c. 0.59 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 200 m

Situated on a hill top spur, overlooking the Lwandani river valley, approximately 1km south of Kaloleni trade centre, this site is located within the compound of Walea Primary school. Late TT/TIW pottery was visible along an eroded foot path and in the cultivated school garden. A considerable quantity of burnt daub and charcoal was also evident. A grab sample of diagnostic materials was made. Oral traditions suggest that this site was occupied by the Jibana during their migration from Shungwaya. Elders gave the same list of Jibana clans identified for Kaya Kwale (HhJw25).

HhJw29 Pongwe-Jimani
Map Sheet: 198/3
UTM Coordinates: 37M 574975 9575567
Period: 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: c. 0.16 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 160 m

This site is situated on the south-east facing hillslopes of Kaya Jibana, immediately overlooking Mgombani 02 (HhJw12). The site is presently cultivated. Surface materials include

Late TT/TIW ceramics, and one fragment of tuyere, suggesting the on site working of iron. Local oral traditions recall this site as being occupied by Jibana from the Mwandazi clan, following dispersion from Kaya Jibana.

HhJw30 Mudzi Mure
Map Sheet: 198/3
UTM Coordinates: 37M 578370 9571689
Period: 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: c. 0.64 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Top
Soil Type: UE1
Vegetation Zone: V
Elevation: 60 m

Situated on a prominent hill formed of remnant Magarini and Kilindini sands overlooking the surrounding Lutsangani Upland, this site has a high concentration of surface materials including Late TT/TIW decorated pottery, imported Indian and Chinese wares, glass beads and cowrie shells. A grab sample of diagnostic materials was made. According to local Kambe informants, it is believed that this site was occupied by the Kambe during their movement from Digo land, before they had established Kaya Kambe. Interstingly, this movement does not appear to have involved all the Kambe at once, but was settled in stages, at first by the Bendugo (?), followed by the Mwaringa, Mwadzua and Matsuma.

HhJw32 Vwevwesi 02
Map Sheet: 198/3
UTM Coordinates: 37M 575635 9578963
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.12 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 180 m

Situated on a south facing hill slope, overlooking a small tributary valley of the River Mtomkuu, this site is located on the southern edge of the Mwarakaya to Kaloleni road, between Kaya Chonyi (HhJw74) to the north, and Kaya Koyeni (HhJw77) to the south. A small concentration of undecorated pottery sherds was seen to have been eroded from a footpath adjoining the road. A grab sample of sherds were collected. There was no available local information about this site.

HhJw33 Mbuyuni-Chonyi 01
Map Sheet: 198/3
UTM Coordinates: 37M 577610 9579104
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.16 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Valley
Soil Type: UL
Vegetation Zone: V
Elevation: 100 m

This site, situated on the flat valley floor of a tributary arm of the River Mtomkuu, approximately 500m north of Mbuyuni Primary school, is marked by a surface scatter of undecorated sherds in cultivated fields either side of a water pipe line track. No surface collection was made. According to our local informant, this site was occupied some four generations ago by a member of the Buta sub-clan of the Mongwe Chonyi, following their expansion from Kaya Chonyi.

HhJw43 Manguja
Map Sheet: 198/3
UTM Coordinates: 37M 573790 9575881
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.64 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 240 m

Situated on the west facing slopes of Kaya Jibana, a scatter of undecorated pottery was observed within a modern settlement area at the edge of Jibana forest. No surface collection was made. Local Jibana informants believe this site was occupied by the Mwamkare sub-clan of the Mongwe Jibana, following their expansion from Kaya Jibana.

HhJw44 Dzifitse
Map Sheet: 198/3
UTM Coordinates: 37M 573229 9574723
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.30 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 180 m

This site is situated on a gently sloping spur extending from the forested southern slopes of Kaya Jibana. Presently occupied, the site is believed by local Jibana informants to have been first settled by one Omari Tsuma, a Muslim who died in 1921, reputedly at the grand old age of 150 years. The site is marked by a general scatter of undecorated surface pottery. Examination of a quarry section cut into the side of the present village and site shows a single occupation horizon, with undecorated sherds, extending to a depth of 0.6m, before reaching the natural subsoil. No surface collection was made.

HhJw45 Vwevwesi 01
Map Sheet: 198/3
UTM Coordinates: 37M 575357 9578785
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 1.44 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 200 m

Situated within a cluster of modern homestead, overlooking a tributary valley of the River Mtomkuu to the south-east, this site has an extensive distribution of undecorated surface pottery. No collection of materials was made. Local informants believe this site was occupied by Chonyi following their expansion from Kaya Chonyi.

HhJw46 Barisa
Map Sheet: 198/3
UTM Coordinates: 37M 574668 9575145
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.16 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 160 m

Situated on the south-east facing slopes of Kaya Jibana, this site overlooks the site of Mwembetayari (HhJw18) on the Kambe-

Mwarakaya road below. Undecorated sherds of pottery were observed at the western, up-hill edge of a modern homestead in cultivated fields. No surface collection was made. The site is traditionally equated with the Mwatsuma clan of Jibana, and is believed to have been established following the expansion of groups out from Kaya Jibana.

HhJw47 Mwamuleli

Map Sheet: 198/3
UTM Coordinates: 37M 573370 9576510
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.16 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 160 m

Situated on a spur projecting out from the western slopes of Kaya Jibana, this site overlooks a tributary stream of the River Lwandani. The site is marked by a concentration of undecorated surface ceramics, extending over the spur, which is presently used as a football pitch. A grab sample of diagnostic surface materials was made. Local informants believe that this site was occupied by the Mwahanjari sub-clan of the Remere Jibana, following the expansion of the Jibana population out from Kaya Jibana.

HhJw48 Toylo

Map Sheet: 198/3
UTM Coordinates: 37M 573135 9576781
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.16 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Valley
Soil Type: US
Vegetation Zone: V
Elevation: 160 m

This site is situated on a south-east facing valley slope, looking across the tributary stream of the River Lwandani to Mwamuleli (HhJw47) and Kaya Jibana (HhJw80). The site is marked by a scatter of undecorated surface pottery, visible from an eroding track. No surface collection was made. Local informants say that this site was also established by the Mwahanjari sub-clan of the Remere Jibana following population expansion out of Kaya Jibana.

HhJw49 Kaya Chilulu

Map Sheet: 198/3
UTM Coordinates: 37M 574814 9580109
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 1.44 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 240 m

Situated on a hill top, overlooking a tributary valley of the River Mtomkuu, approximately 1km north-west of Kaya Chonyi (HhJw74), this site has been deforested and heavily cultivated, resulting in considerable sheet erosion and gullying. Despite this there are considerable quantities of surface material still on the upper slopes of the kaya. These included undecorated local pottery sherds and late 19th century European and Chinese imported porcelains. A grab sample of diagnostic surface materials was made. Kaya Chilulu is recorded by Willis (1996: 89). Informants confirmed Willis' outline of the historical data, with both Chonyi and Jibana groups laying some claim to its foundation. However, it would seem that these competing claims are embedded in contemporary land disputes eg. Jibana informants would insist that it was Chonyi newcomers who were responsible for the Kaya's deforestation and subsequent erosion.

HhJw50 Kaya Vuga
Map Sheet: 198/3
UTM Coordinates: 37M 573278 9580219
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.81 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 180 m

Situated on a hill top overlooking the Tsunguni River valley to the west, and it's tributary to the south-west, this Jibana Kaya still retains some surrounding forest at the Kaya's centre. Access was not granted within this area, but surface observations of undecorated local ceramics were made in areas of recent encroachment by cultivation. No surface collection was made. This Kaya is recorded by Robertson and Luke (1993: 6:15) and by Willis (1996: 89). Informants confirmed Willis' historical outline, the Kaya being founded by Jibana of the Mwayura clan.

HhJw51 Jimani
Map Sheet: 198/3
UTM Coordinates: 37M 575148 9576164
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.20 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 190 m

Situated in a cultivated forest clearing, on the east facing slopes of Kaya Jibana, immediately above Tsagwa Primary school, this site is marked by a small scatter of undecorated pottery sherds. No surface collection was made. Local informants assert that this site was occupied whilst the majority of Jibana peoples continued to live within their Kaya.

HhJw52 Tsagwa
Map Sheet: 198/3
UTM Coordinates: 37M 575031 9576121
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.64 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 200 m

Situated on the east facing hill slopes of Kaya Jibana, some 100m south-west of Jimani (HhJw51), this site has a scatter of undecorated surface ceramics in cultivated fields immediately below the forest line. No surface collection was made. Local knowledge about this site suggests that it was occupied at around the same time as Jimani (HhJw51), when the majority of Jibana peoples continued to live within their Kaya.

HhJw53 Mbwaka Kwamwasemwe
Map Sheet: 198/3
UTM Coordinates: 37M 574417 9574697
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.64 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 180 m

Situated on a south-east facing hill slope of Kaya Jibana, overlooking the River Lwandani, this site is located some 300m south-west of Barisa (HhJw46). The site is marked by a distribution of undecorated surface ceramics. No surface collection was made. Local knowledge about this site suggests that it was occupied following a population expansion out from Kaya Jibana.

HhJw54 Manyani
Map Sheet: 198/3
UTM Coordinates: 37M 573991 9578475
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.36 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 180 m

This site is situated on a south-west facing hill slope oberlooking the River Tsunguni, within the modern settlement of Manyani. Surface observation identified a small concentration of undecorated ceramics. No surface collection was made. Examination of rubbish pit sections scattered throughout the modern settlement revealed no evidence of stratified horizons. However, local traditions recall this site as being established soon after the expansion of the Jibana from Kaya Jibana.

HhJw55 Kaya Kizingo
Map Sheet: 198/3
UTM Coordinates: 37M 573564 9582070
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.36 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 290 m

This site is situated on a prominent hill top, overlooking the River Darajani to the west. No surface materials were observed on the hill top itself. However, undecorated pottery sherds were evident in the surrounding lower slopes suggesting that settlement was concentrated here. This was confirmed by oral traditions which suggested that the hill acted as a look-out post against Kwavi (Massai) raiders who might be approaching the surrounding areas. No collection of surface materials was made. According to Willis' (1996: 87), both Kauma and Jibana informants refer to settlement at Kaya Kizingo. Our own interviews confirmed Kauma claims, but no mention was made by Jibana informants. Instead, several Chonyi informants claimed that the Kaya had been established by the Chonyi, led by Mwangala Gogo, following their migration from Shungwaya. It was said that this group did not follow the other Chonyi into Kaya Chonyi, but instead remained at Kaya Kizingo.

HhJw56 Mbuyuni-Chonyi 02
Map Sheet: 198/3
UTM Coordinates: 37M 576924 9577608
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 1.0 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Valley
Soil Type: UL
Vegetation Zone: V
Elevation: 100 m

Situated on a valley bottom, below the forested hill slopes of Kaya Jibana, at the head of a tributary valley of the River Mtomkuu, this site has a concentration of undecorated ceramics visible in cultivated fields. No surface collection was made. Informants were unable to give any local historical information about this site .

HhJw57 Mbuyuni-Chonyi 03

Map Sheet: 198/3
UTM Coordinates: 37M 577182 9578249
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.59 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Valley
Soil Type: US
Vegetation Zone: V
Elevation: 100 m

Situated on a flat plateau overlooking a tributary valley of the River Mtomkuu, this site has a scatter of mainly undecorated surface sherds. Two sherds with incised line decoration perhaps indicative of Late TT/TIW settlement were noted. No surface collection was made. Local informants suggested that the site was occupied by Chonyi following a population expansion out from Kaya Chonyi.

HhJw58 ~

Map Sheet: 198/3
UTM Coordinates: 37M 575431 9575641
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.25 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 120 m

Situated on the main road between Mgombani and Jibana Health Centre, immediately below the forested hills slopes of Kaya Jibana, this site was believed by informants to have been occupied by Chonyi, following the movement out from Kaya Chonyi. However, surface observation identified only a few undecorated sherds of pottery. No surface collection was made.

HhJw59 ~

Map Sheet: 198/3
UTM Coordinates: 37M 577698 9580051
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.20 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Slope
Soil Type: UL
Vegetation Zone: V
Elevation: 120 m

Situated on a east facing hill slope below Mwarakaya trade centre, this site has a concentration of undecorated pottery sherds visible in cultivated fields. No surface collection was made. Local informants suggest that this site was also occupied by Chonyi following their expansion from Kaya Chonyi.

HhJw60 ~

Map Sheet: 198/3
UTM Coordinates: 37M 577862 9584768
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: c. 0.64 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Top
Soil Type: UL
Vegetation Zone: V
Elevation: 220 m

Situated on a hill top looking south-east, some 300m east of Mwembekati Primary school, this site is marked by a concentration of undecorated surface ceramics visible in cultivated fields. No surface collection was made. Our informants were unable to give any local historical information about this area.

HhJw71 Kaya Umba
Map Sheet: 198/3
UTM Coordinates: 37M 575000 9582200
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: Unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 220 m

Situated on a hill top adjacent to the Chief's camp for Cha Simba South, this Chonyi Kaya is perhaps best seen as an area of Chonyi settlement rather than a true Kaya. The site is briefly discussed by Willis (1996: 87) who notes an apparent lack of historical information for this Kaya.

HhJw74 Chonyi
Map Sheet: 198/3
UTM Coordinates: 37M 575700 9579700
Period: Unknown
Ceramic Tradition: None
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 200 m

Situated on a hill top facing Kaya Chilulu (HhJw49) to the north-east, and Kaya Koyeni (HhJw77) to the south, access to this site was not granted by elders. Described as the Chonyi's principle Kaya (Robertson, S. and W. Luke, 1993: 6:15; Willis, J. 1996: 88), the Kaya appears to have been largely abandoned as an area of settlement by 1913-14.

HhJw77 Koyeni
Map Sheet: 198/3
UTM Coordinates: 37M 575500 9578000
Period: Unknown
Ceramic Tradition: None
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 200 m

This Chonyi Kaya is said to have been established following a dispute in Kaya Chonyi. which focused on the alleged sacrifice of a child as part of the Chonyi rain ritual (Willis, J. 1996: 89). Access within the Kaya was no granted by elders, and no assessment of surface materials could be made.

HhJw80 Jibana
Map Sheet: 198/3
UTM Coordinates: 37M 574800 9576500
Period: Unknown
Ceramic Tradition: None
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 300 m

Situated on a forested hill top ridge, adjoining Kaya Rombo (HhJw81) to the south and Kaya Mulola (HhJw82) to the north, this site forms the principle Kaya of the Jibana. Access into Kaya Jibana was not permitted by the elders. The site is referred to by Robertson and Luke (1993:

6:15), and a summary historical outline given by Willis (1996: 90)

HhJw81 Rombo
Map Sheet: 198/3
UTM Coordinates: 37M 574500 9575000
Period: Unknown
Ceramic Tradition: None
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 260 m

Situated south of Kaya Jibana (HhJw80), on the same forested ridge, access to this site was not granted by elders. Willis (1996: 91) refers to Kaya Rombo as being founded by the Mwayura clan, due to a dispute between members of Kaya Jibana.

HhJw82 Mulola
Map Sheet: 198/3
UTM Coordinates: 37M 575100 9577100
Period: Unknown
Ceramic Tradition: None
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 240 m

Situated north of Kaya Jibana (HhJw80) on the same forested ridge, this site was also believed to have been established as the result of a dispute in Kaya Jibana, this time by the Mwagongo clan (Willis, J. 1996: 91). Access to this site was not permitted by elders.

HhJw84 Kambe
Map Sheet: 198/3
UTM Coordinates: 37M 572300 9572800
Period: Unknown
Ceramic Tradition: None
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 160 m

Situated on its own east facing hill top, surrounded by forest, this site is the principal Kaya of the Kambe. The site has been noted by Robertson and Luke (1993: 6:14), visited by Mutoro (1987: 168), and its historical significance discussed by Willis (1996: 91). Access into the Kaya to assess surface materials was not granted by the elders.

HhJw93 Panga ya Girigiri (Mwarakaya)
Map Sheet: 198/3
UTM Coordinates: 37M 577300 9580600
Period: Unknown
Ceramic Tradition: None
Function: rock shelter
Area: Unknown
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Slope
Soil Type: UL
Vegetation Zone: V
Elevation: 140 m

This site is marked by an outcrop of limestone. At one time forested (Robertson, S. 1987), the area appears to have been largely cultivated. No surface materials were observed. This site is of ritual importance to the Chonyi. Access within the rock shelter was not granted by elders.

HhJw94 Pangani Caves
Map Sheet: 198/3
UTM Coordinates: 37M 575000 9574000
Period: Unknown
Ceramic Tradition: None
Function: rock shelter
Area: Unknown
Socio-Natural Zone: Dzitsoni Upland
Land Form: Valley
Soil Type: UL
Vegetation Zone: V
Elevation: 100 m

This site is situated on the southern valley slopes of the River Lwandani. The site is of ritual importance to the Kambe. Access into the rock shelter was not granted by elders.

HhJw96 Kaya Mwazang'ombe
Map Sheet: 198/3
UTM Coordinates: c. 37M 574000 9579900
Period: Unknown
Ceramic Tradition: None
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 200 m

No reference was made to this site during the 1996/7 survey. However, Willis' (1996: 86) informants identify this site either as an ordinary settlement area, or as a Chonyi Kaya. The site was not visited and its exact location could not be confirmed.

A.6. Rabai Survey Region

HhJw1 Mbuyuni 01
Map Sheet: 198/3
UTM Coordinates: 37M 559149 9563598
Period: 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: 4.32 ha
Socio-Natural Zone: Rabai Upland
Land Form: Flat Plain
Soil Type: UO
Vegetation Zone: II
Elevation: 170 m

This site is situated some 2km north-west of Mazeras trade centre, on a flat plain above the River Mwache to the south. The site is characterised by five mounds, each mound the focus of a concentration of surface materials, including local Late TT/TIW decorated pottery and imported Islamic wares. Excavation during 1997 demonstrated their purposeful construction, made up of lenses of redeposited occupation horizons. These were seen to overlie an original series of early occupation phases, associated with Late TT/TIW pottery, probably contemporary to those deposits used in the mound's construction. The site was visited by Soper (1966), during which he was told that Mbuyuni was the first Duruma Kaya. This is confirmed by Griffiths (1935), Spear (1978) and my own collection of local oral traditions. Spear's (1978, 1982) informants also suggest that the Kambe occupied Mbuyuni during their way from Digo to Kaya Ribe. It is possible therefore, that the final phase of mound construction relates to a later reorganisation of an ordinary settlement area into that of a sacred Kaya.

HhJw3 Nduguni Mkoni
Map Sheet: 198/3
UTM Coordinates: 37M 560695 9559662
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: 2.89 ha
Socio-Natural Zone: Kaloleni Upland

Land Form: Hill Top
Soil Type: HX2
Vegetation Zone: III
Elevation: 160 m

Situated on a hill top overlooking the River Ndzovuni to the south-west, Tudor Creek to the east, and Kaya Mudzi Mwiru (HhJw90) to the north, this site, first identified by Soper (1966), is marked by an extensive scatter of undecorated surface pottery covering much of the hill top and upper slopes. No surface collection was made. Oral traditions suggest that this site was occupied by Duruma who later moved to Kaya Mtswakara. The site is said to have been abandoned following Kwavi (Massai) raids into the area during the 19th century AD.

HhJw5 Mombasa Water Pump
Map Sheet: 198/3
UTM Coordinates: 37M 565965 9567846
Period: MSA
Ceramic Tradition: None
Function: find spot
Area: 0.01 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: HX2
Vegetation Zone: V
Elevation: 80 m

Reported by Omi (1984), this MSA find spot is situated below Nduguni Mkoni (HhJw3), on the southern road cutting of the Nairobi to Mombasa road. Finds included a core, nine flakes and two stone fragments attributed to the MSA.

HhJw19 Changombe 03
Map Sheet: 198/3
UTM Coordinates: 37M 565965 9567846
Period: 1000-500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: 0.42 ha
Socio-Natural Zone: Rabai Upland
Land Form: Flat Plain
Soil Type: UO
Vegetation Zone: V
Elevation: 160 m

Situated on a flat plain, below the forested, northern slopes of Kaya Bomu (HhJw66), in a modern coconut plantation, this site is characterised by a concentration of undecorated and Late TT/TIW decorated surface pottery. There are frequent fragments of charcoal and small pieces of bone observable in the broken top soil. Local traditions suggest that this site was occupied by one Chambangwe of the Daha sub-clan of the Gambani Rabai, following their expansion out from Kaya Bomu. This is believed to have taken place some four generations ago.

HhJw22 Mwakatama 01
Map Sheet: 198/3
UTM Coordinates: 37M 561935 9562199
Period: 600-1000 AD
Ceramic Tradition: TT/TIW
Function: open-settlement
Area: 0.64 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: III
Elevation: 120 m

Situated below the forested hill slopes of Kaya Mudzi Mwiru (HhJw90), on the north-east facing slopes of the Mtsapuni river valley, this site has been almost entirely destroyed by intensive sand quarrying. Examination of the quarry section showed occupation horizons extending to a depth of 0.7m, with TT/TIW decorated pottery, charcoal and bone exposed. A grab sample of diagnostic materials was made. Oral traditions refer to this site as being the first village to be occupied by the Rabai, on their arrival from

Shungwaya/Rombo. The site is referred to, but not located by Robertson (1987) and Willis (1996: 94).

HhJw23 Mwakatama 02
Map Sheet: 198/3
UTM Coordinates: 37M 561904 9562345
Period: 600-1000 AD
Ceramic Tradition: TT/TIW
Function: open-settlement
Area: 0.20 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Valley
Soil Type: US
Vegetation Zone: III
Elevation: 140 m

Situated 300m up stream from Mwakatama 01 (HhJw22), this site has so far escaped the activities of the quarry diggers. Surface materials include TT/TIW decorated ceramics. No surface collection was made. Local informants suggest that this site was occupied at some time before Mwakakatama 01. The site is believed to have been established by the Munga, a sub-clan of the Yombo Rabai. According to our informant, the Munga were at this time said to have been a group of hunters, travelling from Nyasa land.

HhJw35 Mwamkwala
Map Sheet: 198/3
UTM Coordinates: 37M 564500 9563500
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: 0.06 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: III
Elevation: 200 m

This site is situated on the ridge of hill tops between Kaya Mudzi Mwiru (HhJw90) to the south, and Kaya Mwarai (HhJw91) to the north. Undecorated surface pottery was observed in the gardens of a private house. No surface collection was made. The site is believed by local elders to have been occupied by Rabai following their expansion out from Kaya Bomu (HhJw66), but before their reoccupation of Kaya Mudzi Mwiru.

HhJw37 Kidzembeni
Map Sheet: 198/3
UTM Coordinates: 37M 564300 9564580
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: 3.24 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: III
Elevation: 190 m

Situated on the west facing slopes below Kaya Mwarai (HhJw91), overlooking a tributary valley of the River Kombeni, this site is presently under fallow bush. Surface observation identified undecorated pottery and a series of in situ fire heated stones believed by informants to have been cooking hearths. A grab sample of diagnostic pottery was collected. This site is referred to as a Rabai Kaya by Spear's (1982) informants, and is briefly discussed by Willis (1996: 94), where the site is recorded to have been abandoned at least from 1852. Oral traditions collected during 1997 suggest that the site was established as a secondary settlement following population pressures in Kaya Mwarai. The site also seems to be known as Bendeji by some informants, a name given to Robertson (1987) and referred to by Willis (1996: 94).

HhJw38 Changombe 01
Map Sheet: 198/3
UTM Coordinates: 37M 566964 9565804
Period: 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: 0.30 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 80 m

Situated on an east facing hill slope, below Kaya Bomu (HhJw66), this site overlooks the gently sloping valley of the River Mvuvu. The site has been cultivated, exposing a high concentration of Late TT/TIW pottery sherds. A grab sample of materials was collected, including a single pebble of iron ore. Oral traditions suggest that the area of Changombe, including this site, was occupied at the same time as the other Rabai Kaya. However, the informant suggested that people only used the Kaya for defensive and ritual functions, the majority of time was spent outside the Kaya cultivating the land and looking after their livestock. This site is believed to have been occupied for at least seven generations.

HhJw39 Changombe 02
Map Sheet: 198/3
UTM Coordinates: 37M 566495 9567511
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: 0.9 ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Valley
Soil Type: US
Vegetation Zone: V
Elevation: 120 m

Situated on a gentle, south-east facing slope running down to the River Beguro, this site is presenlty occupied by several homesteads. A distribution of mainly undecorated, but some decorated sherds of local pottery were observed in cultivated gardens. A grab sample of diagnostic materials was collected. Local elders suggest that this settlement was established some three generations ago by the Mwamtukuyu sub-clan of the Gambani Rabai, who had moved from Kaya Bomu, via an unspecified location in Changombe, to the present site.

HhJw40 Kwa Bechombo
Map Sheet: 198/3
UTM Coordinates: 37M 569039 9564766
Period: (1000-1500 AD) post 1500 AD
Ceramic Tradition: (Late TT/TIW) Plain Ware
Function: open-settlement
Area: 0.42 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Valley
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 40 m

Located between the modern settlements of Kwa Bechombo and Kazoli, this site is situated on the gentle, east facing slopes of the Kisiwana river valley. The site is marked by a surface distribution of mainly undecorated pottery sherds, but with several sherds bearing Late TT/TIW decorative attributes. No collection of surface materials was made. According to local elders, the site was founded by Lwambi Madzungu Bechombo of the Mukavyo sub-clan of the Mvitsa Rabai, following population expansion out from Kaya Bomu (HhJw66) some three generations ago.

HhJw41 Golo
Map Sheet: 198/3
UTM Coordinates: 37M 567593 9567280
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement

Area: 4.0ha
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: HX2
Vegetation Zone: V
Elevation: 120 m

Situated on a south-east facing valley spur, projecting between the rivers Golo and Beguro, this site has a loose scatter of undecorated surface ceramics. No surface collection was made. The site is said to have been founded by a member of the Mwandaje clan when they first moved out of Kaya Bomu (HhJw66) as a result of expanding population pressures. This is said to have taken place some three generations ago, during the time of Krapf (between 1846-1853).

HhJw42 Bemravai
Map Sheet: 198/3
UTM Coordinates: 37M 565742 9567304
Period: Unknown
Ceramic Tradition: None
Function: Sacred grove
Area: Unknown
Socio-Natural Zone: Rabai Upland
Land Form: Hill Slope
Soil Type: UO
Vegetation Zone: V
Elevation: 140 m

Situated on the lower north-west facing slopes of Kaya Bomu (HhJw66), approximately 1km west of Changombe Primary school, this site forms a small forested grove amidst the modern settlement of Changombe. Elders recall that this site is believed to have originally been part of Kaya Bomu, but due to deforestation has now become separated. Despite this, the site is held sacred, and is used by elders for prayers, before entering the Kaya proper. The famous Rabai prophet Taki, who was renowned for his ability to locate buried *Fingos* is said to be buried here. Access into this grove was not granted by the elders.

HhJw65 Kaya Ribe
Map Sheet: 198/3
UTM Coordinates: 37M 570000 9569200
Period: Unknown
Ceramic Tradition: Unknown
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: USK
Vegetation Zone: V
Elevation: 80 m

The principle Ribe Kaya is situated on a hill top bounded to the south-west by the River Mleji and the south-east by the River Mbuzini. This Kaya is recorded by Robertson (1987), Robertson and Luke (1993: 6:14) and Willis (1996:92). Access into the Kaya was not granted by the elders.

HhJw66 Kaya Bomu (Vokera)
Map Sheet: 198/3
UTM Coordinates: 37M 566300 9565800
Period: 600 - post 1500 AD
Ceramic Tradition: TT/TIW – Plain Ware
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 180 m

Situated on a forested hill top overlooking Changombe to the north, this Rabai Kaya, is believed to have been established following a movement of Rabai out from Kaya Mudzi Mwiru (HhJw90) (Robertson S. and W. Luke, 1993: 6:13; Willis, J. 1996: 93). A test excavation by Mutoro (1987: 185-189) has demonstrated three stratified horizons, extending to a depth of 1.0m, with ceramics characterised by TT/TIW, Late TT/TIW and Plain Ware attributes. Access into this Kaya was not granted by the elders.

HhJw67 Kaya Fimboni
Map Sheet: 198/3
UTM Coordinates: 37M 566400 9565000
Period: Unknown
Ceramic Tradition: Unknown
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 120 m

Situated on the same hill ridge as Kaya Bomu (HhJw66), overlooking the steeply cut valley of the River Kombeni to the south, this site has incorrectly been identified with the group of settlements situated in Changombe (Willis, J. 1996: 93). It is now clear, following the demarcation of Kaya boundaries by the Coastal Forest Conservation Unit (Githitho, A. 1996), that Kaya Fimboni is perceived by the Rabai as a separate entity, located south of Kaya Bomu. Access within the Kaya was not granted by the elders.

HhJw68 Kaya Ivuni
Map Sheet: 198/3
UTM Coordinates: c. 37M 563400 9564400
Period: Unknown
Ceramic Tradition: Unknown
Function: Kaya
Area: Unknown
Socio-Natural Zone: Rabai Upland
Land Form: Hill Slope
Soil Type: UO
Vegetation Zone: III
Elevation: 130 m

This previously unlocated Rabai Kaya is approximately situated between Kaya Mpya (HhJw69) to the north, and Kaya Mudzi Mwiru (HhJw90) to the south. Local tradition suggests that Ivuni was established by Rabai who left Kaya Bomu (HhJw90) due to population pressure. The site was not visited.

HhJw69 Kaya Mpya
Map Sheet: 198/3
UTM Coordinates: c. 37M 563500 9565500
Period: Unknown
Ceramic Tradition: Unknown
Function: Kaya
Area: Unknown
Socio-Natural Zone: Rabai Upland
Land Form: Hill Slope
Soil Type: UO
Vegetation Zone: III
Elevation: 180 m

This site was not located during the 1996/7 survey. It is referred to by Robertson and Luke (1993: 6:14) and a brief historical overview and approximate location is given by Willis (1996: 93-94). The site was used as a base by Krapf during the late 1840's.

HhJw90 Kaya Mudzi Mwiru (Mriale)
Map Sheet: 198/3
UTM Coordinates: 37M 563000 9562000
Period: 600 – post 1500 AD
Ceramic Tradition: TT/TIW – Plain Ware
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: V
Elevation: 260 m

Situated on Benyagundo Hill, overlooking Tudor Creek, this site is commonly referred to as the first Rabai Kaya (Robertson, S. and W. Luke, 1993: 6:14; Spear, T. 1982; Willis, J. 1996: 93). Several excavation trenches were carried out by Mutoro (1987: 178-185), during which three main stratified horizons, extending to a depth of 0.8m were identified. Finds included TT/TIW, Late TT/TIW and Plain Ware pottery sherds, as well as shell and glass beads, imported pottery, and iron slag. A thermoluminiscence date (Alpha-869) obtained from a sherd of pottery recovered from the middle horizon was recorded as 10th century AD.

HhJw91 Kaya Mwarai
Map Sheet: 198/3
UTM Coordinates: 37M 565300 9564500
Period: Unknown
Ceramic Tradition: Unknown
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kaloleni Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: V
Elevation: 60 m

This Rabai Kaya is mentioned by Robertson (1987), but not properly identified on the ground. Discussion with elders during 1997 would seem to suggest its location on the southern hill slopes of the Kombeni River valley, looking north towards Kaya Bomu (HhJw66). No further information was collected about this Kaya and access to the site was not granted by the elders.

A.7. Kwale Survey Region

HiJv6 Kaya Godoni
Map Sheet: 201/1
UTM Coordinates: 37M 547500 9539800
Period: Unknown
Ceramic Tradition: None
Function: Kaya
Area: Unknown
Socio-Natural Zone: Shimba Plateau
Land Form: Hill Top
Soil Type: UE1
Vegetation Zone: III
Elevation: 440 m

This Digo Kaya, situated on the steep, west facing escarpment of the Shimba Plateau, presently falls within the northern boundary of the Shimba Hills National Park, some 2km west of Kwale town centre. The site was not visited during the 1996/7 survey. However, a brief reconnaissance was made by Soper (1966), during which he noted the existence of a defensive ditch, reported as 6ft deep, with internal bank, reported as 6ft high, on the Kaya's west side. He does not refer to surface materials and recalls that the defenses were said to have been constructed to defend against Kwavi (Massai) raids. The site is reported as a Kaya by Robertson (1987), and Robertson and Luke (1993).

HiJv10 Chombo 01
Map Sheet: 200/2
UTM Coordinates: 37M 554303 9543058
Period: 600-1000 AD
Ceramic Tradition: TT/TIW
Function: open-settlement
Area: 2.2 ha
Socio-Natural Zone: Kwale Upland
Land Form: Valley
Soil Type: US
Vegetation Zone: II
Elevation: 140 m

Situated on the west facing slopes of Chombo river valley, this site forms part of multi-foci settlement distribution encompassing Chombo 02 (HiJv11), Chombo 03 (HiJv12), and Chombo Sacred Grove (HiJv25). The site is marked by two surface concentrations, area A and B respectively, both characterised by TT/TIW decorated ceramics. First recorded by Abungu (1996 *pers. com.*), a program of systematic surface collection and excavation was undertaken during 1997. Results suggested an earlier TT/TIW phase of occupation, with some evidence of continuity between Kwale Ware and TT/TIW attributes in area A, with a later expansion of the settlement area to B, where the pottery was seen to have TT/TIW attributes only. Oral traditions collected during 1996/7 suggested that Chombo was occupied by the Chombo clan of the Digo, following their movement from Kaya Kwale (HfJv18). It was alos said that memebrs of this group later moved to Mteza 01 (HiJw55).

HiJv11 Chombo 02
Map Sheet: 200/2
UTM Coordinates: 37M 554095 9543549
Period: 600-1000 AD
Ceramic Tradition: TT/TIW
Function: open-settlement
Area: 1.44 ha
Socio-Natural Zone: Kwale Upland
Land Form: Valley
Soil Type: US
Vegetation Zone: II
Elevation: 140 m

Situated on the south-east facing slopes of Chombo river valley, opposite to Chombo 01 (HiJv10), this site was seen to form a surface concentration of TT/TIW decorated pottery sherds. A grab sample of diagnostic surface materials was made. The site is believed to be contemporary to Chombo 01, but is treated as a separate settlement foci for locational purposes.

HiJv12 Chombo 03
Map Sheet: 200/2
UTM Coordinates: 37M 553964 9543193
Period: 600-1000 AD
Ceramic Tradition: TT/TIW
Function: open-settlement
Area: 1.21 ha
Socio-Natural Zone: Shimba Plateau
Land Form: Valley
Soil Type: HX2
Vegetation Zone: II
Elevation: 160 m

Situated on the south-east facing slopes of the Chombo river valley, some 300m up stream from Chombo 02 (HiJv11), this site has a concentration of TT/TIW pottery sherds exposed on the areas cultivated surface. A grab sample of diagnostic surface materials was made. The site is believed to be contemporary to Chombo 01, but for locational purposes is treated as a separate settlement foci.

HiJv13 Chimea
Map Sheet: 200/2
UTM Coordinates: 37M 553989 9544366
Period: 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: 1.0 ha
Socio-Natural Zone: Shimba Plateau
Land Form: Hill Slope
Soil Type: HX2
Vegetation Zone: VI
Elevation: 160 m

Situated on a north-west facing spur extending from the northern slopes of the Shimba Plateau, this site has a relatively low concentration of Late TT/TIW pottery sherds exposed in the uncultivated, rocky surface. A grab sample of diagnostic surface materials was made. Local information about this site was equally sparse, but it was briefly referred to as a settlement occupied by Digo who had left Kaya Kwale.

HiJv14 Miyani
Map Sheet: 200/2
UTM Coordinates: 37M 549383 9540375
Period: (1000-1500 AD) post 1500 AD
Ceramic Tradition: (Late TT/TIW) Plain Ware
Function: open-settlement

Area: 4.0 ha
Socio-Natural Zone: Shimba Plateau
Land Form: Plateau
Soil Type: UE1
Vegetation Zone: V
Elevation: 400 m

Situated in cultivated fields, approximately 500m west of Kaya Kizwani (HiJv15), this site is marked by a high density of surface materials. These include mainly undecorated Plain Ware ceramics, but a small selection of Late TT/TIW sherds were also identified during the collection of a grab sample of diagnostic surface materials. The site is believed to have been established by a group of Digo from the Chombo clan, who had moved here from Kaya Pemba, the location of which is not yet known.

HIJv15 Kaya Kizwani
Map Sheet: 200/2
UTM Coordinates: 37M 549796 9540004
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: 0.59 ha
Socio-Natural Zone: Shimba Plateau
Land Form: Plateau
Soil Type: UE1
Vegetation Zone: V
Elevation: 380 m

Marked on the 1:50,000 Survey of Kenya map sheet as a patch of forest, this reputed Digo Kaya has now been cleared for cultivation. A small scatter of undecorated surface pottery was observed in the road cutting to the west of this Kaya, but no intense concentration of materials was immediately evident. No surface collection was made. The site is locally believed to have been occupied by Digo who expanded out from Kaya Kwale.

HIJv16 Kitsantse
Map Sheet: 200/2
UTM Coordinates: 37M 551658 9543326
Period: Unknown
Ceramic Tradition: None
Function: Sacred Grove
Area: 0.64 ha
Socio-Natural Zone: Shimba Plateau
Land Form: Valley
Soil Type: UE1
Vegetation Zone: II
Elevation: 260 m

Situated in a forested valley, cut by the River Kitsantse, and fed by a spring at the valley's head, this site was visited, but due to the thick forest vegetation and ground litter, surface observation was almost impossible. No materials were observed, but according to our informant, the site, characterised by rocky outcrops, is an important focus for Digo rituals. Indeed, comparisons with Chombo river valley suggests that this area might reward a more thorough archaeological investigation in the future.

HIJv17 Kaya Golini
Map Sheet: 200/2
UTM Coordinates: 37M 552525 9541984
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: 5.5 ha
Socio-Natural Zone: Shimba Plateau
Land Form: Plateau
Soil Type: UE1
Vegetation Zone: II
Elevation: 340 m

This site is spread over a large area, north-east of Golini Primary School. Situated amongst cultivated fields and modern homesteads, the site is marked by a loose distribution of undecorated surface pottery, occasional fragments of bone, and charcoal flecks. A grab sample of diagnostic materials was made. The site is reputed to have been a Kaya, occupied by Digo following their movement out from Kaya Kwale, and before they were to settle below the Shimba Plateau, between Chombo and Mteza. However, surface evidence would suggest that this site was occupied considerably later than those identified at Chombo and Mteza.

HlJv19 Kaya Mtae
Map Sheet: 200/2
UTM Coordinates: 37M 550000 9546000
Period: Unknown
Ceramic Tradition: None
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kwale Upland
Land Form: Hill Top
Soil Type: HX2
Vegetation Zone: II
Elevation: 290 m

Situated on a steeply rising hill overlooking the Cha Simba (Pemba) river valley, and the Shimba Plateau to the south, this Digo Kaya, now encapsulated within the boundaries of Malugani Forest Reserve was not visited during the 1996/7 survey. Recorded by Robertson (1987) and Robertson and Luke (1993), there is very little known about the historical context of this Kaya.

HlJv25 Chombo Sacred Grove
Map Sheet: 201/1
UTM Coordinates: 37M 553900 9542900
Period: Unknown
Ceramic Tradition: None
Function: Sacred Grove
Area: c. 0.59 ha
Socio-Natural Zone: Shimba Plateau
Land Form: Valley
Soil Type: HX2
Vegetation Zone: II
Elevation: 180 m

Situated on the steeply rising, north facing hill slopes of the Shimba Plateau, this site is focused on the rocky outcrops and annual spring which feeds the Chombo river valley. Partially forested, no surface materials were observed at this site. Still a major source of fresh water for Digo communities living immediately below the Shimba Plateau, the site is held as a Sacred Grove by local elders who believe the area provided both shelter and security to the early Chombo settlers in times of war and disease.

HlJw55 Mteza 01 (Kaya Mwanyondo)
Map Sheet: 201/1
UTM Coordinates: 37M 557760 9547543
Period: (600-1000 AD) 1000-1500 AD
Ceramic Tradition: (TT/TIW) Late TT/TIW
Function: open-settlement
Area: 1.32 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Top
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 20 m

Situated on a north facing spur, overlooking a steep incline down to the Cha Simba (Pemba) river valley, this site has a high concentration of surface materials covering the hill top and west facing upper slopes. Diagnostic materials included both TT/TIW and Late TT/TIW ceramics with the observed attributes indicating a gradual transitional stage between. A systematic surface collection and excavation was conducted during 1997. Results suggest that Mteza was a relatively small scale settlement with only a single phase of major occupation. Local oral traditions tentatively associate this site with Kaya Mwanyondo, one of several Digo settlements occupied following the expansion of small splinter groups from Chombo.

HIJw56 Mteza 02
Map Sheet: 201/1
UTM Coordinates: 37M 557943 9547039
Period: 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: 0.9 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 40 m

Located approximately 600m south of Mteza 01 (HiJw55), this site has a scatter of Late TT/TIW pottery sherds exposed in the thin cultivated soils overlooking a tributary valley of the River Cha Simba (Pemba). A grab sample of diagnostic materials was made. Local traditions believe this site to have been occupied by Digo at the same time as Mteza 01.

HIJw57 Bang'a
Map Sheet: 201/1
UTM Coordinates: 37M 557703 9547159
Period: 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: 1.80 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Top
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 40 m

Situated on a north facing ridge overlooking the River Cha Simba (Pemba), this site, marked by a group of Baobab trees, has a concentration of Late TT/TIW pottery exposed on cultivated fields. A grab sample of diagnostic materials was made. The site is believed by local informants to have been occupied following the movement of Digo from Chombo.

HIJw58 Mteza 03
Map Sheet: 201/1
UTM Coordinates: 37M 557005 9547417
Period: 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: 1.21 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 40 m

Located on a west-facing hill slope above the River Cha Simba (Pemba), and directly opposite Mteza 01 (HiJw55), this site is seen to have a scatter of Late TT/TIW decorated pottery sherds exposed in cultivated fields. A cultivation pit revealed a single horizon extending to a depth of 0.5m, characterised by frequent marine shells, and a single bone, identified as *caprini* species. The site is believed by local informants to have been occupied by groups of Digo who had moved from Chombo.

HIJw59 Mteza 04
Map Sheet: 201/1
UTM Coordinates: 37M 557118 9548880
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: 0.2 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Plateau
Soil Type: UE1
Vegetation Zone: IIb
Elevation: 50 m

Situated on a prominent hill top, overlooking the Cha Simba river valley which flows around the hills western side, this site is located within the grounds of Mteza Primary School. The site has a scatter of undecorated pottery sherds eroding from what would appear to be a slight midden, made up of charcoal and shell/bone fragments. No surface collection was made. The site is believed by local informants to have been occupied by Digo following their movement from Chombo.

HiJw60 Teleza
Map Sheet: 201/1
UTM Coordinates: 37M 557351 9543813
Period: Unknown
Ceramic Tradition: None
Function: open-settlement
Area: Unknown
Socio-Natural Zone: Kwale Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: IIb
Elevation: 140 m

This site is situated on a gentle, north-east facing hill slope, between Kaya Teleza (HiJw75) and Kaya Lunguma (HiJw79). During our site visit, the area was covered in knee-high grass, considerably reducing surface visibility and preventing identification of surface materials. However, the site was shown to us by elders, who believe this area was occupied by Digo prior to the foundation of Kaya Lunguma.

HiJw61 Mvumoni
Map Sheet: 201/1
UTM Coordinates: 37M 554784 9542099
Period: Unknown
Ceramic Tradition: None
Function: Sacred Grove
Area: 0.64 ha
Socio-Natural Zone: Kwale Upland
Land Form: Valley
Soil Type: US
Vegetation Zone: VI
Elevation: 180 m

Situated at the east facing foot of the Shimba Plateau, this site occupies the head of a tributary valley of the River Manjera. Covered by tall grass, no surface materials were observed. However, the site was reported to have been a sacred focus for Digo communities, prior to the establishment of Kaya Teleza (HiJw75). Today, all rituals conducted in the Kaya are said not to proceed until prayers are offered at this site.

HiJw62 Vidzayani 01
Map Sheet: 201/1
UTM Coordinates: 37M 558483 9544402
Period: 1000-1500 AD
Ceramic Tradition: Late TT/TIW
Function: open-settlement
Area: 0.72 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 100 m

Located south of the Kwale-Matuga-Likoni junction, north-east of Kaya Lunguma (HiJw79), this site, partly cultivated and partly under bush, has a concentration of Late TT/TIW ceramics. A grab sample of diagnostic materials was collected. The site is believed to have been founded by a Digo group following their movement out from a Kaya, but the exact Kaya was not known. 'Vidzayani' approximately means 'place of the artifacts' in Ki-digo (Mududu, H. 1996 *pers. com.*).

HiJw63 Vidzayani 02
Map Sheet: 201/1
UTM Coordinates: 37M 558298 9544184
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: 0.72 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UT2
Vegetation Zone: IIb

Elevation: 100 m

Situated on a gentle north-east facing slope, between Vidzayani 01 (HiJw62) and Kaya Lunguma (HiJw79), this site, partly destroyed by the digging of several cattle water-holes, is marked by a scatter of undecorated pottery sherds. No stratified horizon was evident in the water-hole sections. The site is believed by local informants to have been occupied by Digo following their movement from an unspecified Kaya.

HiJw64 Vidzayani 03
Map Sheet: 201/1
UTM Coordinates: 37M 558340 9544532
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: 0.56 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UT2
Vegetation Zone: IIb
Elevation: 90 m

Situated on the lower north-east facing slopes below Vidzayani 01 (HiJw62), this site, covered by thick bush has a small scatter of undecorated pottery sherds. Again this site is believed to have been occupied by a group of Digo who moved here from an unspecified Kaya.

HiJw65 Gandini 01
Map Sheet: 201/1
UTM Coordinates: 37M 556440 9543403
Period: Unknown
Ceramic Tradition: None
Function: open-settlement
Area: Unknown
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Slope
Soil Type: UL
Vegetation Zone: II
Elevation: 100 m

Situated on a east facing valley slope, adjoining the River Ndzovuni (Lutsangani), this site situated in partially cleared forest had no visible surface materials. However, according to our local informant, the site was believed to have been occupied by Digo groups who had moved out from Kaya Gandini (HiJw76).

HiJw66 Gandini 02
Map Sheet: 201/1
UTM Coordinates: 37M 556044 954190
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: 0.42 ha
Socio-Natural Zone: Kwale Upland
Land Form: Hill Slope
Soil Type: US
Vegetation Zone: II
Elevation: 150 m

Situated on the lower south-east facing slopes of Kaya Gandini (HiJw76), on the Gandini to Dzivani road, this site has a concentration of undecorated surface materials visible in tall grass and scrub of abandoned fields. No surface collection was made. Local informants suggest that this site was occupied by groups of Digo who had expanded out from Kaya Gandini.

HiJw67 Gandini 03
Map Sheet: 201/1
UTM Coordinates: 37M 556515 9552599
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: 1.44 ha
Socio-Natural Zone: Lutsangani Upland
Land Form: Valley
Soil Type: UT2
Vegetation Zone: II
Elevation: 60 m

Situated on a south-west facing valley slope, above a tributary stream of the River Ndzovuni (Lutsangani), this site is marked by a series of low rectangular mounds, which would seem to be abandoned house platforms. A scatter of undecorated ceramics was observed across the site, but long grass restricted visibility. No surface collection was made. The site is believed to have been occupied by Digo who had left Kaya Gandini. A local elder recalled that this site was abandoned during the time of his grandfather, at least 50 years ago.

HIJw68 Gandini 04
Map Sheet: 201/1
UTM Coordinates: 37M 556086 9553801
Period: post 1500 AD
Ceramic Tradition: Plain Ware
Function: open-settlement
Area: 0.25 ha
Socio-Natural Zone: Dzitsoni Upland
Land Form: Hill Slope
Soil Type: UL
Vegetation Zone: II
Elevation: 140 m

Situated on a north facing hill slope, 400m south of Gandini 02 (HiJw66), this site has a concentration of undecorated pottery sherds. No surface collection was made. The site is believed by local informants to have been established by Digo who had expanded out of kaya Gandini.

HIJw75 Kaya Teleza (Dugumura)
Map Sheet: 201/1
UTM Coordinates: 37M 556000 9542500
Period: Unknown
Ceramic Tradition: None
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kwale Upland
Land Form: Hill Top
Soil Type: HX2
Vegetation Zone: VI
Elevation: 240 m

Situated on an isolated, forested hill top, approximately 1km north-east of the Shimba plateau, very little information has so far been collected concerning the historical context of this Digo Kaya (Robertson, S. and W. Luke, 1993). Access within the Kaya was not granted, and a brief reconnaissance carried out around the Kaya boundaries failed to identify any surface materials.

HIJw76 Kaya Gandini
Map Sheet: 201/1
UTM Coordinates: 37M 556500 9556000
Period: Unknown
Ceramic Tradition: None
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kwale Upland
Land Form: Hill Top
Soil Type: HX2
Vegetation Zone: II
Elevation: 200 m

Recorded by Robertson and Luke (1993), little is known about the historical context of this Digo Kaya, situated on a forested hill slope, looking east towards Mwache Creek. Access to this Kaya was not granted by the elders.

HIJw79 Kaya Lunguma
Map Sheet: 201/1
UTM Coordinates: 37M 558000 9544000
Period: Unknown
Ceramic Tradition: None
Function: Kaya
Area: Unknown
Socio-Natural Zone: Kwale Upland
Land Form: Hill Top
Soil Type: US
Vegetation Zone: IIb
Elevation: 120 m

Often confused with Kaya Teleza (Robertson, S. 1987; Robertson, S. and W. Luke, 1993), this Digo Kaya is situated on a forested hillslope overlooking Bombo Creek, some 1.5km to its east. Permission to enter this Kaya was not granted by the elders.

HiJw80 Kaya Chonyi
Map Sheet: 201/1
UTM Coordinates: 37M 559000 9550500
Period: Unknown
Ceramic Tradition: None
Function: Kaya
Area: Unknown
Socio-Natural Zone: Lutsangani Upland
Land Form: Hill Slope
Soil Type: UE1
Vegetation Zone: IIb
Elevation: 40 m

This Duruma Kaya is situated on a forested, south-east facing hill slope overlooking Mteza Creek. Recorded by Robertson (1987) and Robertson and Luke (1993), little information about the historical context of this Kaya is yet available. Access within the Kaya was not permitted by the elders.

Appendix B. List of Archaeological Sites identified outside of Survey Regions

Note that all sites are given with reference to the National Museums of Kenya National Survey and Archaeological Site Inventory, Fort Jesus Museum.

Socio-Natural	SASES	Site Name	Map Sheet	UTM	East	North	Material Culture	Notes
Low Coastal Plain	HeKa1	Kibiukani Mosque	193/1	37M	628200	9658700	Late TT/TIW-Plain	
	HeKa2	Mambrui Mosque	193/1	37M	628800	9655500	Late TT/TIW-Plain	
	HeKa3	Jemadazi Mosque	193/1	37M	624200	9647400	Late TT/TIW-Plain	
	HeKa4-7	Malindi	193/1	37M	624600	9644700	TT/TIW-Plain	
	HeKa10	Kijiwe Tanga 01	193/1	37M	620000	9641600	Late TT/TIW	
	HeKa14	-	193/1	37M	615200	9653200	Wavy Line	
	HeKa15	-	193/1	37M	613100	9653300	Late TT/TIW	
	HfJx1	Mida Creek Mosque	192/4	37M	607600	9625900	Late TT/TIW-Plain	
	HfJx2	Mgangani Mosque	192/4	37M	610700	9633800	Late TT/TIW-Plain	
	HfJx3	Kilepwa	192/4	37M	607500	9630200	Late TT/TIW-Plain	
	HfJx5	Vyombo Mosque	192/4	37M	605600	9623900	Late TT/TIW-Plain	
	HfJx6	Mida Creek 02	192/4	37M	604800	9631400	Late TT/TIW	
	HfJx10	Mida Creek 01	192/4	37M	606000	9625000	Late TT/TIW	
	HfKa1	Gedi	193/3	37M	612900	9634500	(Wavy Line) Late TT/TIW	Excavated
	HfKa2	Watamu Mosque	193/3	37M	612500	9629400	Late TT/TIW-Plain	
	HfKa3	Kiburugeni Mosque	193/3	37M	612400	9629000	Late TT/TIW-Plain	
	HfKa4	Mgangani	193/3	37M	612900	9634500	Late TT/TIW-Plain	
	HfKa5	-	193/3	37M	620200	9639100	Late TT/TIW	
	HfKa6	Kijiwe Tanga 02	193/3	37M	620300	9638800	Late TT/TIW	
	HgJx1	Kilifi	198/2	37M	595300	9598500	Late TT/TIW-Plain	
	HgJx2	Mnarani	198/2	37M	593600	9597900	Late TT/TIW-Plain	
	HgJx3	Kioni	198/2	37M	595600	9597600	Late TT/TIW-Plain	
	HgJx4	Kitoka	198/2	37M	596000	9593800	Late TT/TIW-Plain	
	HhJx1	Kinuni Mosque	198/4	37M	592100	9579200	Late TT/TIW-Plain	
	HhJx2	Kijipwa Mosque	198/4	37M	590400	9574300	Late TT/TIW-Plain	
	HhJx3	Jumba la Mtwana	198/4	37M	585500	9564100	TT/TIW-Plain	
	HhJx4	Mtwapa	198/4	37M	584700	9563400	TT/TIW-Plain	Excavated
	HhJx5	Vipingo	198/4	37M	592000	9575000	Late TT/TIW-Plain	
	HiJw1-14	Mombasa	201/1	37M	575000	9550000	TT/TIW-Plain	Excavated
	HiJw15	Tiwi Mosque	201/1	37M	567800	9535500	Late TT/TIW-Plain	
	HiJw16	Twiga Mosque	201/1	37M	565700	9531600	Late TT/TIW-Plain	
	HiJw17	Kirima	201/1	37M	565300	9531400	Late TT/TIW-Plain	
	HiJw18	Chai	201/1	37M	562900	9533700	Late TT/TIW	
	HiJw20	Omar Hill	201/1	37M	569500	9550100	MSA	Excavated
	HiJw21	Sassoon Hill	201/1	37M	569300	9550200	ESA	Excavated
	HiJw22-44	Mtongwe	201/1	37M	569350	9549900	ESA-LSA	Excavated
	HiJw49	Tangila 01	201/1	37M	564900	9540750	MSA	
	HiJw51	Kombani 01	201/1	37M	563860	9537150	MSA	
	HiJw52	Kombani 02	201/1	37M	563300	9537250	MSA	
	HiJw70	Shonda	201/1	37M	571800	9546000	Unknown	Kaya
	HiJw71	Similani Caves	201/1	37M	572000	9543000	Unknown	Sacred Grove
	HiJw74	Waa	201/1	37M	568000	9536000	Unknown	Kaya
	HiJw82	Kombani1	201/1	37M	565000	9537000	Unknown	Kaya
	HiJw83	Kombani2	201/1	37M	564000	9537000	Unknown	Kaya

Socio-Natural	SASES	Site Name	Map Sheet	UTM	East	North	Material Culture	Notes
Low Coastal Plain	HjJv4-5	Msambweni Tumbe	200/4	37M	555100	9506400	Late TT/TIW-Plain	
	HjJw1	Kongo Mosque	201/3	37M	566300	9529400	TT/TIW-Plain	
	HjJw2	Diani Mosque	201/3	37M	565100	9525600	Late TT/TIW-Plain	
	HjJw3	Ukunda Town	201/3	37M	563100	9525900	Late TT/TIW-Plain	
	HjJw4	Galu	201/3	37M	562000	9518000	TT/TIW-Late TT/TIW	Excavated
	HjJw5	Gazi Palace	201/3	37M	556100	9509900	Late TT/TIW-Plain	
	HjJw6	Gazi Mosque	201/3	37M	556100	9509900	Late TT/TIW-Plain	
	HjJw7	Tiwi	201/3	37M	566000	9530000	Late TT/TIW-Plain	Kaya
	HjJw8	Diani	201/3	37M	565000	9527700	Late TT/TIW-Plain	Kaya
	HjJw9	Ukunda	201/3	37M	563000	9523500	Late TT/TIW-Plain	Kaya
	HjJw10	Muhaka	201/3	37M	558000	9521000	Late TT/TIW-Plain	Kaya
	HjJw11	Kinondo(Ngalaani)	201/3	37M	560500	9514500	Late TT/TIW-Plain	Kaya
	HjJw12	Ganzoni(Galu)	201/3	37M	562000	9519000	Unknown	Kaya
	HjJw13	Chale	201/3	37M	559000	9509000	Late TT/TIW-Plain	Kaya
	HjJw14	Timbwa(Mgwani)	201/3	37M	560000	9514000	Unknown	Kaya
	HkJu1	Vanga Town	202/1	37M	524200	9485300	Late TT/TIW-Plain	
	HkJu2	Magugu Mosque	202/1	37M	524900	9484900	Late TT/TIW-Plain	
	HkJu3	Vumba Kuu	202/1	37M	521400	9484400	Late TT/TIW-Plain	
	HkJu6	Jego	202/1	37M	520000	9488000	Late TT/TIW-Plain	Kaya
	HkJv1	Munge Mosque 01	202/1	37M	531500	9500500	Late TT/TIW-Plain	
	HkJv2	Munge Mosque 02	202/1	37M	551000	9501800	Late TT/TIW-Plain	
	HkJv3	Shirazi South Mosque	202/2	37M	545400	9497500	Late TT/TIW-Plain	
	HkJv4	Shirazi North Mosque	202/2	37M	545400	9497800	Late TT/TIW-Plain	
	HkJv5	Pangwe Mosque	202/2	37M	537500	9496200	Late TT/TIW-Plain	
	HkJv6	Hurumuzi	202/2	37M	536500	9495300	Late TT/TIW-Plain	
	HkJv7	Aleni Mosque	202/2	37M	531900	9494900	Late TT/TIW-Plain	
	HkJv8	Shimoni Mosque	202/2	37M	541800	9486800	Late TT/TIW-Plain	
	HkJv9	Wazini Town	202/2	37M	540500	9485400	Late TT/TIW-Plain	
	HkJv10	Wazini Cemetery	202/2	37M	542000	9484700	Late TT/TIW-Plain	
	HkJv11	Bogowa	202/2	37M	539230	9504390	Unknown	Kaya
	HkJv13	Mazumalumte	202/2	37M	529200	9490400	Late TT/TIW	
Pingilikani Upland	HeJw2	Matalone	192/1	37M	570200	9658000	Plain	
	HeJx1	-	192/2	37M	588800	9665100	Wavy Line	
	HeJx2	-	192/2	37M	602400	9657900	Wavy Line	
	HeJx3	-	192/2	37M	606600	9667500	Wavy Line	
	HeJx4	-	192/2	37M	607600	9665300	Wavy Line	
	HeJx5	Kilima Kwalitete	192/2	37M	608500	9651600	Plain	
	HeJx6	Marafa	192/2	37M	606800	9665800	Wavy Line	
	HeJx7	Kolbani	192/2	37M	609500	9653700	Plain	
	HeJx8	Madungoni	192/2	37M	610200	9647300	Plain	
	HeJx9	Marafa Mkua wa Chula	192/2	37M	608800	9665400	Late TT/TIW	
	HeJx10	Singwaya	192/2	37M	594600	9655500	Late TT/TIW-Plain	Kaya
	HeJx11	Kabuyuni	192/2	37M	605600	9645900	LSA	
	HeJx12	Starehe	192/2	37M	601500	9653000	Unknown	Kaya
	HeJx13	Mwambani	192/2	37M	603000	9652300	Unknown	Kaya
	HeJx14	Bura	192/2	37M	603900	9651000	Unknown	Kaya
	HeJx15	Maiowe	192/2	37M	604500	9648300	Unknown	Kaya
	HeJx16	Bate	192/2	37M	602800	9648000	Late TT/TIW-Plain	Kaya
	HeJx17	Marafa Nyari	192/2	37M	606800	9666500	Unknown	Sacred Grove
	HeJx18	Bore Nyari	192/2	37M	601000	9660000	Unknown	Sacred Grove
	HeJx19	Madungoni Nyari	192/2	37M	605000	9645500	Unknown	Sacred Grove
	HeJx20	Baricho	192/2	37M	587400	9657100	Late TT/TIW	

Socio-Natural	SASES	Site Name	Map Sheet	UTM	East	North	Material Culture	Notes
Pingilikani Upland	HeJx21	Dagamara	192/2	37M	602100	9653100	Late TT/TIW-Plain	Kaya
	HeJx22	-	192/2	37M	589000	9656400	Late TT/TIW	
	HeKa8	Gulani Mgonda(Lake)1	193/1	37M	611700	9657300	Wavy Line	
	HeKa9	Gulani Mgonda(Lake)2	193/1	37M	612100	9656800	Wavy Line	
	Heka12	-	193/1	37M	613900	9667600	Wavy Line	
	HeKa13	-	193/1	37M	616400	9664900	Wavy Line	
	HhJw83	Tsolokero(Junju)	198/3	37M	582500	9574000	Unknown	Kaya
	HiJw50	Tangila 02	201/1	37M	564400	9541000	MSA	
	HiJw53	Kigato	201/1	37M	562150	9537450	MSA	
	HiJw84	Guzo	201/1	37M	562000	9535000	Unknown	Kaya
	HkJv12	Shimoni Caves	202/2	37M	539220	9504380	Unknown	Sacred Grove
Lutsangani Upland	HfJx8	-	192/4	37M	587200	9624700	Late TT/TIW	
	HhJw4	Mabanda Yagombe	198/3	37M	563450	9558900	MSA	
	HhJw6	Mte Panga	198/3	37M	577000	9559100	MSA	
	HhJw7	Ngutatu	198/3	37M	575400	9560800	MSA	
	HiJw19	Kipetauso	201/1	37M	564400	9555600	Late TT/TIW-Plain	
	HiJw45	Kwa Jomvu	201/1	37M	568000	9557300	MSA	
	HiJw46	Miritini	201/1	37M	564850	9557450	MSA	
	HiJw47	Makumba	201/1	37M	576200	9559600	MSA	
	HiJw48	Nyali	201/1	37M	576300	9558200	MSA	
	HiJw54	Mbuguni	201/1	37M	561300	9546300	Late TT/TIW-Plain	Kaya
	HiJw69	Mtongwe	201/1	37M	566000	9550000	Unknown	Kaya
	HiJw72	Kiteje	201/1	37M	565000	9548000	Unknown	Kaya
	HiJw73	Bombo	201/1	37M	565000	9544000	Unknown	Kaya
	HiJw77	Mrongondoni	201/1	37M	565000	9547000	Unknown	Kaya
	HiJw78	Mihongani	201/1	37M	567000	9550000	Unknown	Kaya
Kaloleni Upland	HgJw30	Maiowe	198/1	37M	578000	9595100	Unknown	Kaya
	HgJw32	Chivara	198/1	37M	577000	9592800	Unknown	Kaya
	HhJw92	Chang'ombe	198/3	37M	566000	9567000	Unknown	Kaya
Kwale Upland	HiJv8	Kivumoni	200/2	37M	551800	9535800	Late TT/TIW	
	HiJv23	Shimba Forest 02	200/2	37M	551800	9535900	Late TT/TIW	
	HiJw81	Mtswakara	201/1	37M	558000	9557500	Unknown	Kaya
	HjJv1	Nguluku	200/4	37M	545600	9515600	MSA	
	HjJv3	Kidongo Hill	200/4	37M	540800	9523100	Late TT/TIW	
	HjJv6	Shelrick Falls	200/4	37M	547780	9526560	Plain	
	HjJv13	Mwele Mwachamwana	200/4	37M	547500	9528500	Late TT/TIW	Sacred Grove
	HjJv15	Makobe	200/4	37M	544500	9520200	Plain	
	HjJv16	Mwaluvanga	200/4	37M	541900	9517800	Plain	
	HjJv17	Kidongo	200/4	37M	540800	9523100	Plain	
Shimba Plateau	HiJv1	Kwale Ditch	200/2	37M	548700	9536400	Kwale Ware	
	HiJv2	Longo Magandi	200/2	37M	547200	9533400	Late TT/TIW	
	HiJv3	Kwale Forest	200/2	37M	548600	9537600	Kwale Ware	
	HiJv4	Kwale1	200/2	37M	547900	9536100	Kwale Ware	
	HiJv5	Kwale2	200/2	37M	547800	9536000	Kwale Ware	
	HiJv7	Giryama	200/2	37M	548500	9530800	Late TT/TIW	
	HiJv9	Pengo Hill	200/2	37M	542500	9530700	Plain	
	HiJv18	Kwale	200/2	37M	549000	9537000	Late TT/TIW-Plain	Excavated Kaya
	HiJv20	Longo Ya Mwagandi	200/2	37M	547000	9531500	Unknown	Kaya

Socio-Natural	SASES	Site Name	Map Sheet	UTM	East	North	Material Culture	Notes
Shimba Plateau	HiJv22	Shimba Forest 01	200/2	37M	549500	9532800	Late TT/TIW	
	HiJv24	Shimba Foret 03	200/2	37M	549100	9534700	Plain	
	HjJv14	Mwele Mbondoni	200/4	37M	539500	9526300	Late TT/TIW	Sacred Grove
Rabai Upland	HfJw4	Migodomani	192/3	37M	576700	9618000	Late TT/TIW	
	HhJw8	Chigate	198/3	37M	557500	9561800	MSA	
	HhJw78	Kidzini	198/3	37M	564500	9577300	Late TT/TIW-Plain	Kaya
Kinango Upland	HiJv21	Puma	200/2	37M	528500	9542000	Unknown	Kaya
	HjJv2	Mrima Hill(Myemani)	200/4	37M	528900	9503600	Plain	
	HjJv7	Mrima Hill(Madggo)	200/4	37M	527700	9503800	Plain	
	HjJv8	Mrima Hill(Kigalagala)	200/4	37M	529100	9503300	Plain	
	HjJv9	Mrima Hill(Vitakavifu)	200/4	37M	528600	9504700	Plain	
	HjJv10	Mrima Hill(Kigongoni)	200/4	37M	529600	9504100	Late TT/TIW	
	HjJv11	Mrima	200/4	37M	529000	9504500	Late TT/TIW-Plain	Kaya
	HjJv12	Chitoon(Maji Moto)	200/4	37M	533000	9513000	Late TT/TIW	Sacred Grove
	HjJv18	Jombo Hill	200/3	37M	523500	9510000	Late TT/TIW-Plain	Kaya
	HkJu4	Sega	202/1	37M	513000	9498000	Late TT/TIW-Plain	Kaya
	HkJu5	Gonja	202/1	37M	514000	9494000	Late TT/TIW-Plain	Kaya
High Coastal Plain	HeJw1	Mkwajuni	192/1	37M	574000	9654000	Late TT/TIW	
	HfJw1	Kavulini	192/3	37M	572700	9629900	MSA	
	HgJw31	Jorore	198/1	37M	555500	9593500	Unknown	Kaya
	HhJw73	Fungo(Giryama)	198/3	37M	556900	9580000	Late TT/TIW-Plain	Kaya

Appendix C. Description of Ceramic Fabrics

C.1 Distribution of local ceramic fabrics by site and excavated phase

Fabric	Mgombani					Chombo				Mteza				Mtsengo									Mbuyuni						Total
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C4	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25	C26	C27	C28	
1	7	7	30	17																									61
2		5	24	6	2																								37
3	3		18	10																									31
4	2	7	10	9	4																								32
5				24																									24
6		2	32	6	1																								41
7		2		6																									8
8	2		5	8																									15
9			1	7																									8
10	8	3	11	11	2																								35
11		4		2																									6
12	3	5	20	18																									46
13	4	16	19	51	1																								91
14	8	17	20	69	1																								115
15		1	1	8	3																								13
16			3	1	1																								5
17		1	3	2	2																								8
18				3																									3
19		1																											1
20		1																											1
21	1																												1
22		1			16																								17
23						83	169	241	44																				537
24						12	46	89	84																				231
25							8	23	21																				52
26						25	57	81	41																				204
27								1	1																				2
28						3	7	14	13																				37
29										2	1	19	8																30
30										2		8	10																20
31										4		24	28																56
32											2	18	20																40
33										5	4	17	7																33
34										32	4	101	19																156
35										13	1	31	42																87
36										3		4	13																20
37												16	15																31
38													1																1
39																				1									1
40														1															1
41															4	4													8
42														2	25														27
43														7	24	43	52												126
44														2			1												3
45																		3											3
46																	9	20											29
47														3	1	7	3	7		4									25
48																		1											1
49														4	9	12	32	39		1									97
50																1	29	16											46
51																			1										1
52																			1										1
53																			1										1
54																			1										1
55																		3	2	1									6
56														1	2	11	29	15	1										59
57																		4	2	1									7
58																			1										1
59																		9	2										11
60														1	39	32	12	46	17	7									154
61																			1		3								4
62																					3								3
63																					1								1
64																					1								1
65																		7	3	3	2								15
66														2	5		20	54	31	2	13	6							133
67														9	28	80	1	15	1	10		17							161
68																					14	14							28
69														10	38	27	18		1	4	23	9							130
70																					3	4							7
71																				1	18	6							25
72																							5	8	39	28	47	14	141
73																								19	67	27	21	4	138
74																								6	27	18	38	8	97
75																							4	15	30	30	31	7	117
76																							3	3	31	27	47	7	118
77																										1			1
78																							10	20	59	7	6	4	106
79																								2	7				9
Total	38	73	197	258	33	123	287	449	204	61	12	238	163	42	175	217	206	239	66	35	81	56	22	73	260	138	190	44	3980

C.2 Description of local ceramic fabrics from the five excavated site assemblages

The following description of ceramic fabrics are based on visual and tactile examination of the surfaces and fresh fractures, using a hand-held lens at X30 magnification. The format follows that outlined by Orton *et. al.* (1993: 231-242). Copies of the fabric recording sheets are held in Fort Jesus Museum, Mombasa.

Mgombani (trench 03)

Fabric 1 Soft sandy paste, mid-yellowish orange to brownish grey surface, with dark blue-grey core. Surface feel is smooth, sherd fracture is fine, occasionally laminated. Inclusions are fairly sorted, and includes white mica (size <0.5 mm; freq. <0.5%), quartz/quartzite (size <0.5 mm; freq. 5%), red and black iron ore (size 0.5-1.0 mm; freq. <5%), and limestone/oolite (size 0.5-3.0 mm; freq. <5%). Differentiation between this fabric and fabrics 2 and 3 is poor.

Fabric 2 Medium to soft sandy paste, mid to light yellowish red surface, with mid to dark blue-grey core. Surface feel is rough (powdery), sherd fracture is irregular. Inclusions are good to fairly sorted, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-1.0 mm; freq. 10%), black iron ore (size 0.5-1.0 mm; freq. <5%) and limestone/oolite (size 0.5-1.0 mm; freq. 5%). Differentiation between this fabric and fabrics 1 and 3 is poor.

Fabric 3 Soft sandy paste, mid-blue grey to mid-yellowish red surface, with mid-yellowish red to dark blue-grey core. Surface feel is smooth (powdery), sherd fracture is fine. Inclusions have good sorting, and includes white mica (size <0.5 mm; freq. < 5%) and quartz/quartzite (size <0.5 mm; freq. <5%). Differentiation between this fabric and fabrics 1 and 2 is poor.

Fabric 4 Soft grity paste, mid to dark grey brown surface, with dark grey brown core. Surface feel is rough, sherd fracture is irregular. Inclusions are good to fairly sorted, and includes quartz/quartzite (size 0.5-2.0 mm; freq. <10%), black iron ore (size 0.5-1.0 mm; freq. 5%), limestone/oolite (size 1.0-3.0 mm; freq. <5%), feldspar (size 0.5-2.0 mm; freq. 5%) and unidentified metasediment (size 0.5-3.0 mm; <5%).

Fabric 5 Soft sandy paste, light to mid grey orange surface, with an occasional mid-blue-grey core. Surface feel is rough, sherd fracture is irregular. Inclusions have poor to fair sorting, and includes quartz/quartzite (size 0.5-2.0 mm; freq. 5%), black iron ore (size 0.5-1.0 mm; freq. <5%), limestone/oolite (size 0.5-3.0 mm; freq. <5%) and unidentified metasediment (size 0.5-3.0 mm; freq. <5%).

Fabric 6 Soft sandy paste, mid orange yellow surface, with an occasional dark blue-grey core. Surface feel is rough, sherd fracture is fine. Inclusions have poor to fair sorting, and includes quartz/quartzite (size 0.5-3.0 mm; freq. 10%), black iron ore (size 0.5-3.0 mm; freq. <5%), and irregular voids, possibly limestone/oolite (size 0.5-3.0 mm; freq. 10%). Differentiation between this fabric and fabrics 8 and 13 is poor.

Fabric 7 Medium to hard sandy paste, mid-orange brown to dark orange grey surface with a mid-orange grey to dark blue-grey core. Surface feel is rough to harsh, sherd fracture is irregular. Inclusions have poor to fair sorting, and includes quartz/quartzite (size 0.5-2.0 mm; freq. 10%), black iron ore (size 0.5-1.0 mm; freq. 5%), and irregular voids, possibly limestone/oolite (size 0.5-2.0 mm; freq. 10%).

Fabric 8 Soft sandy paste, mid-reddish orange surface and core. Surface feel is rough, sherd fracture is irregular. Inclusions have fair to good sorting, and includes white mica (size <0.5 mm; freq. 5%), quartz/quartzite (size 0.5-1.0 mm; freq. 5%), red iron ore (size 0.5-1.0 mm; freq. <5%), and black iron ore (size 0.5-1.0 mm; freq. 5%). Differentiation between this fabric and fabric 13 is poor, but paste seems less coarse, inclusions less frequent.

Fabric 9 Soft coarse paste, light orange-grey to olive-grey surface and core. Surface feel is rough, sherd fracture is irregular. Inclusions have poor to fair sorting, and includes white mica (size <0.5 mm; freq. 5%), quartz/quartzite (size 0.5-1.0 mm; freq. 10%), red iron ore (size 0.5-3.0 mm; freq. <5%), limestone/oolite (size 0.5-3.0 mm; freq. 5%), oval voids (size >3.0 mm; freq. <5%), unidentified basic igneous (size 0.5-3.0 mm) and clay pellets (size 0.5-3.0 mm; freq. 5%).

Fabric 10 Soft sandy paste, light yellow grey to orange surface and core. Surface feel is rough, sherd fracture is irregular. Inclusions have fair to good sorting, and includes white mica (size <0.5; freq. <5%), quartz/quartzite (size 0.5-2.0 mm; freq. 5%), red iron ore (size 0.5-1.0 mm; freq. <5%), oval voids (size 0.5-1.0 mm; freq. 5-10%), and clay pellets (size 0.5-2.0 mm; freq. <5%).

Fabric 11 Soft coarse paste, light to mid-yellow grey and orange brown surface and core. Surface feel is fine, sherd fracture is irregular. Inclusions have fair to goof sorting, and includes white mica (size <0.5 mm; freq. 5%), quartz/quartzite (size 0.5-2.0 mm; freq. 20%), black iron ore (size 0.5-2.0 mm; freq. 5%), and rounded voids (size 0.5-1.0 mm; freq. 5%).

Fabric 12 Soft sandy paste, light to mid-reddish orange surface, with an occasionally greyer core. Surface feel is rough, sherd fracture is irregular. Inclusions have poor to good sorting, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-3.0 mm; freq. 15%), black iron ore (size 0.5-1.0 mm; freq. <5%), clay pellets (size 0.5-3.0 mm; freq. 10%), and shell (size 0.5-1.0 mm; freq. 5%).

Fabric 13 Soft sandy paste, mid-reddish orange surface and core. Surface feel is rough, sherd fracture is irregular. Inclusions have poor to good sorting, and includes dark mica (size <0.5 mm; freq. 5%), white mica (size <0.5 mm; freq. 5%), quartz/quartzite (size 0.5-3.0 mm; freq. 20%), and black iron ore (size 0.5-1.0 mm; freq. 10%). Differentiation between this fabric and fabrics 6 and 8 is poor.

Fabric 14 Soft paste, light to mid-orange brown to dark grey-brown surface and core. Surface feel is rough, sherd fracture is irregular. Inclusions have poor to good sorting, and includes dark mica (size <0.5 mm; freq. 5%), white mica (size <0.5; freq. 5%), quartz/quartizite (size 0.5-2.0 mm; freq. 10%), black iron ore (size 0.5-1.0 mm; freq. 5%), and red iron ore (size 0.5-2.0 mm; freq. <5%). Note that this group has a high degree of internal variability.

Fabric 15 Soft coarse paste, light yellow orange to dark grey surface and core. Surface feel is harsh, sherd fracture is hackly. Inclusions have fair to good sorting, and includes white mica (size 0.5-1.0 mm; freq. 5%), quartz/quartzite (size 0.5-2.0 mm; freq. 5%), unidentified metasediment (size 0.5-2.0 mm; freq. <5%), and shell (size 0.5-1.0 mm; freq. <5%).

Fabric 16 Soft paste, light to mid orange red surface and core. Surface feel is smooth to tough, sherd fracture is hackly. Inclusions are fairly sorted, and includes quartz/quartzite (size 0.5-1.0 mm; freq. 5%), black iron ore (size 0.5-1.0 mm; freq. 5%) and clay pellets (size 0.5-1.0 mm; freq. 5%).

Fabric 17 Hard fine paste, light yellow-grey to grey-pink surface and core. Surface feel is smooth to rough, sherd fracture is hackly. Inclusions have poor to good sorting, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-1.0 mm; freq. 5%), black iron ore (size 0.5-1.0 mm; freq. 5%), red iron ore (size 0.5-2.0 mm; freq. <5%), and unidentified metasediment (size 0.5-3.0 mm; freq. <5%).

Fabric 18 Soft fine paste, light orange yellow surface and core. Surface feel is rough (powdery), sherd fracture is hackly. Inclusions have fair to very good sorting, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-1.0 mm; freq. <5%), black iron ore (size 0.5-1.0 mm; freq. <5%), and a dull white grain, possibly calcined bone (size 0.5-2.0 mm; freq. <5%).

Fabric 19 Soft fine paste, mid oange brown surface and core. Surface feel is medium, sherd fracture is irregular. Inclusions have fair to good sorting, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-1.0 mm; freq. 5%), black iron ore (size 0.5-1.0 mm; freq. <5%), rounded voids (size 0.5-1.0 mm; freq 5-10%), and shell (size 0.5-1.0 mm; freq. <5%). Only one sherd was recovered for this fabric group.

Fabric 20 Hard fine paste, mid to dark orange brown surface and core. Surface feel is smooth, sherd fracture is fine, occasionally irregular. Inclusions have fair to good sorting, and includes quartz/quartzite 9size 0.5-1.0 mm; freq. <5%), black iron ore (size 0.5-2.0 mm; freq. 5%), and red iron ore (size 0.5-1.0 mm; freq. <5%). Only one sherd was recovered from this fabric group.

Fabric 21 Hard, very coarse paste, light yellow surface and core. Surface feel is rough, sherd fracture is irregular. Inclusions are poorly sorted, and includes quartz/quartzite only (size 0.5-3.0 mm; freq. >30%). Only one sherd was recovered from this fabric group.

Fabric 22 Hard fine paste, mid to dark grey-brown surface and core. Surface feel is medium to smooth, sherd fracture is irregular. Inclusions are fairly sorted and includes quartz/quartzite (size 0.5-2.0 mm; freq. 5%), and black iron ore (size 0.5-1.0 mm; freq. 5%).

Chombo (trench 04)

Fabric 23 Soft coarse paste, mid to dark orange-brown grey surface, with dark grey-black core. Surface feel is rough, sherd fracture is irregular. Inclusions are fairly sorted, and includes white mica (size <0.5 mm; freq. 5%), quartz/quartzite (size 0.5-2.0 mm; freq. <5%), black iron ore (size 0.5-1.0 mm; freq. <5%), and limestone/oolite (size 0.5-1.0 mm; freq. <5%). Note that this fabric group has a high degree of internal variability.

Fabric 24 Soft coarse paste, light to mid orange grey surface and core. Surface feel is rough, sherd fracture is irregular. Inclusions are fairly sorted, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-2.0 mm; freq. <5%), black iron ore (size 0.5-1.9 mm; freq.<5%), red iron ore (size 0.5-1.0 mm; freq. <5%), limestone/oolite (size 0.5-1.0 mm; freq. <5%), and irregular voids (size 0.5-2.0 mm; freq. <5%). Note that this fabric group has a high degree of internal variabilty.

Fabric 25 Soft coarse paste, mid to dark brown grey surface and core. Surface feel is rough, sherd fracture is irregular. Inclusions have poor to fair sorting, and includes white mica 9size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-2.0 mm; freq. <5%), black iron ore (size 0.5-1.0 mm; freq. <5%), red iron ore (size 1.0-2.0 mm; freq. <5%), limestone/oolite 9size 0.5-1.0 mm; freq. <5%), unidentified metasediment (size 1.0-2.0 mm; freq. <5%), and shell (size 1.0-2.0 mm; freq. <5%). Note that this fabric has a high degree of internal variabilty.

Fabric 26 Soft coarse paste, light to mid orange grey surface, with occasional dark grey core. Surface feel is rough to harsh, sherd fracture is irregular. Inclusions have very poor to fair sorting, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-2.0 mm; freq. 10-20%), red iron ore (size 0.5-2.0 mm; freq. <5%), limestone/oolite (size 0.5-1.0 mm; freq. <5%), unidentified metasediment (size 0.5-10.0 mm; freq. <5%), and shell (size 1.0-2.0 mm; freq. <5%).

Fabric 27 Soft fine paste, mid-reddish orange to mid-grey surface and core. Surface feel is medium to rough, sherd fracture is fine to irregular. Inlcusions have very poor to fair sorting, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-1.0 mm; freq. <5%), black iron ore (size 0.5-1.0 mm; freq. <5%); red iron ore (size 0.5-1.0 mm; freq. <5%); and shale metasediment (size 0.5-10.0 mm; freq. <5%).

Fabric 28 Soft sandy paste, light to mid yellow orange and dark grey surface and core. Surface feel is rough (powdery), sherd fracture is fine. Inclusions are fairly sorted, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-6.0 mm; freq. <5%), black iron ore (size 0.5-2.0 mm; freq. <5%), red iron ore (size 0.5-2.0 mm; freq. <5%), limestone/oolite (size 0.5-2.0 mm; freq. <5%), and shale metasediment (size 1.0-4.0 mm; freq. <5%). This fabric group does have some similarities with soft sandy paste fabric groups identified in Mgombani (trench 03).

Mteza 01 (trench 1)

Fabric 29 Soft coarse paste, mid to dark orange brown/grey surface and core. Surface feel is rough, sherd fracture is irregular. Inclusions have poor to good sorting, and includes quartz/quartzite (size 0.5-1.0 mm; freq. <5%), black iron ore (size 0.5-1.0 mm; freq. <5%), red iron ore (size 0.5-2.0 mm; freq. <5%), limestone/oolite (size 0.5-2.0 mm; freq. <5-5%), irregular voids (size 0.5-8.0 mm; freq. 5%), and shale metasediment (size 0.5-5.0 mm; freq. <5%). This fabric group is relatively well defined, but does share similarity with fabric 35.

Fabric 30 Soft coarse paste, light to mid grey brown surface and mid to dark grey brown core. Surface feel is medium, sherd fracture is irregular. Inclusions have poor to fair sorting, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-1.0 mm; freq. 5%), and limestone/oolite (size 0.5-5.0 mm; freq. <5%). Differentiation between this fabric group and fabric 36 is poor.

Fabric 31 Soft sandy paste, light to mid orange brown surface and light to mid grey brown core. Surface feel is medium (powdery), sherd fracture is irregular to fine. Inclusions are fairly sorted, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-1.0 mm; freq. <5%), black iron ore (size 0.5-1.0 mm; freq. <5%), and limestone/oolite (size 0.5-1.0 mm; freq. <5%). This fabric group is very similar to fabric 37, but differentiated by absence of red iron ore inclusion.

Fabric 32 Soft coarse paste, mid reddish orange surface and mid reddish orange to grey brown core. Surface feel is rough, sherd fracture is irregular. Inclusions are fairly sorted, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-1.0 mm; freq. 5-10%), black iron ore (size 0.5-2.0 mm; freq. <5%), red iron ore (size o.5-2.0 mm; freq. <5%), and limestone/oolite (size 0.5-1.0 mm; freq. <5%).

Fabric 33 Soft coarse paste, mid reddish orange/brown surface with occasionally dark grey brown core. Surface feel is harsh to rough, sherd fracture is irregular. Inclusions are fairly sirted, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-2.0 mm; freq. 5-15%), black iron ore (size 0.5-1.0 mm; freq. <5%), red iron ore (size 0.5-1.0 mm; freq. <5%), and limestone/oolite (size 0.5-1.0 mm; freq. <5%).

Fabric 34 Soft fine paste, light to mid grey brown surface and core. Surface feel is rough and 'brittle', sherd fracture is irregular. Inclusions are fairly sorted, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-2.0 mm; freq. <5%), limestone/oolite (size 0.5-1.0 mm; freq. <5%), and shale metasediment (size 0.5-1.0 mm; freq. <5%). This is a large fabric group with poor differentiation between fabrics 35 and 36.

Fabric 35 Soft coarse paste, mid to dark orange brown/grey surface and core. Surface feel is medium to rough, sherd fracture is irregular. Inclusions are fairly sorted, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-2.0 mm; freq. <5-10%), limestone/oolite (size 0.5-1.0 mm; freq. <5%), and unidentified metasediment (size 0.5-2.0 mm; freq. <5%). Differentiation between this fabric group and fabrics 34 and 36 is poor.

Fabric 36 Soft coarse paste, mid to dark orange brown/grey surface and mid to dark grey core. Surface feel is medium, and sherd fracture is irregular. Inclusions have poor to fair sorting, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-2.0 mm; freq. <5%), limestone/oolite (size 0.5-6.0 mm; freq. <5%), and unidentified metasediment (size 0.5-3.0 mm; freq. <5%). Differentiation between this fabric group and fabrics 34 and 35 is poor.

Fabric 37 Soft sandy coarse paste, light to mid reddish brown surface and core. Surface feel is medium to rough (powdery), and sherd fracture is fine to irregular. Inclusions are fairly sorted, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-2.0 mm; freq. <5-5%), black iron ore (size 0.5-1.0 mm; freq. <5%), red iron ore (size 0.5-2.0 mm; freq. <5%), and limestone/oolite (size 0.5-1.0 mm; freq. <5%).

Fabric 38 Hard fine paste, mid to dark grey surface with pink margins and mid grey core. Surface feel is smooth, sherd fracture is fine. Inclusions are fairly sorted, and includes white mica (size <0.5 mm; freq. 5%), quartz/quartzite (size <0.5 mm; freq. <5%), unidentified metasediment (size 0.5-1.0 mm; freq. 5%), and irregular voids (size <0.5 mm; freq. 5%).

Mtsengo (trench 01)

Fabric 39 Hard paste, dark yellow brown surface and dark grey core. Surface feel is smooth, sherd fracture is fine. Inclusions have poor to fair sorting, and includes dark mica (size 0.1 mm; freq. 20%), quartz/quartzite (size 0.25-0.5 mm; freq. 5%), black iron ore (size 0.25-0.5 mm; freq. 5%), and sand (size <0.5 mm; freq. 5%).

Fabric 40 Hard paste, dark grey to dark orange brown surface and light grey brown core. Surface feel is smooth, sherd fracture is fine. Inclusion have poor to good sorting, and includes dark mica (size <0.5 mm; freq. 5-10%), quartz/quartzite (size 0.5-1.0 mm; freq. <10%), shell (size <0.5 mm; freq. <5%), and grog (size 0.5 mm; freq. <5%).

Fabric 41 Hard paste, mid to dark brown grey surface and mid yellow grey core. Surface feel is rough, sherd fracture is irregular. Inclusions have very poor to good sorting, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.25-3.0 mm; freq. 10%), and red iron ore (size 1.0 mm; freq. <5%). Inclusions might also include organic material.

Fabric 42 Hard paste, light blue grey to mid yellow grey surface and light pinkish grey core. Surface feel is smooth, sherd fracture is fine. Inclusions have poor to good sorting, and includes white mica (size <0.5 mm; freq. 5%), quartz/quartzite (size 0.25-1.0 mm; freq. 5%), and shell (size 0.25-3 mm; freq. 20%).

Fabric 43 Hard coarse paste, mid grey/orange brown surface and mid pinkish orange core. Surface feel is rough, sherd fracture is irregular. Inclusions have very poor to good sorting, and includes white mica (size <0.5 mm; freq. 5%), quartz/quartzite (size 0.25-4.0 mm; freq. 10%), black iron ore (size 0.5-2.0 mm; freq. 5%), clay pellets (size <0.5 mm; freq. 5%), and shell (size <0.5-3.0 mm; freq. 10-20%).

Fabric 44 Hard fabric, light to dark blue grey surface and mid brown grey core. Surface feel is rough to smooth, sherd fracture is irregular. Inclusions have poor to good sorting, and includes white mica (size <0.5 mm; freq. 10%), and quartz/quartzite (size 0.5-2.0 mm; freq. 5-10%).

Fabric 45 Hard fabric, light to mid reddish brown and brownish yellow surface and light yellow grey core. Surface feel is smooth, sherd fracture is irregular to fine. Inclusions have very poor to very good sorting, and includes dark mica (size <0.5 mm; freq. 5%), quartz/quartzite (size 0.5-5.0 mm; freq. 10%), black iron ore (size <0.5 mm; freq. 5%), and clay pellets (size <0.5 mm; freq. 5%).

Fabric 46 Hard paste, mid brownish grey to orange brown surface and mid brown grey core. Surface feel is rough, sherd fracture is irregular. Inclusions have poor to good sorting, and includes white mica (size <0.5 mm; freq. 10%), and shell (size <0.5-1.5 mm; freq. 5%).

Fabric 47 Hard paste, mid orange brown to dark grey surface and light orange brown core. Surface feel is smooth, sherd fracture is fine. Inclusions have poor to good sorting, and includes white mica (size <0.5 mm; freq. 5%), quartz/quartzite (size 0.5-1.0 mm; freq. 10%), black iron ore/unidentified metasediment (size <0.5 mm; freq. 10%), shell (size 0.25-2.0 mm; freq. 5-10%), and sand (size 0.25 mm; freq. 5%).

Fabric 48 Medium soft paste, dark brown grey surface and core. Surface feel is smooth, sherd fracture is fine. Inclusions have poor to good sorting, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 1.0-2.0 mm; freq. 10%), black iron ore (size 0.5 mm; freq. <5%), unidentified metasediment (size 2.0 mm; freq. <5%), and shell (size <0.5-2.0 mm; freq. <5%).

Fabric 49 Medium hard paste, mid orange to dark grey surface and light grey brown core. Surface feel is harsh to smooth, sherd fracture is irregular. Inclusions have poor to good sorting, and includes dark mica (size <0.5 mm; freq. 5-10%), quartz/quartzite (size <0.5-1.0 mm; freq. <10%), shell (size <0.5 mm; freq. 5-10%), and grog (size 0.5 mm; freq. <5%).

Fabric 50 Hard paste, dark yellow grey surface and dark pinkish grey core. Surface feel is smooth, sherd fracture is irregular. Inclusions have poor to good sorting, and includes dark mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-1.5 mm; freq. 5%), shell (size <0.5 mm; freq. <5%), and grog (size <0.5 mm; freq. <5%).

Fabric 51 Hard paste, light orange brown surface and core. Surface feel is rough, sherd fracture is fine. Inclusions have very poor to very good sorting, and includes dark mica (size <0.5 mm; freq. 5%), quartz/quartzite (size <0.5-3.0 mm; freq. <10%), and shell (size <0.5 mm; freq. <5%).

Fabric 52 Hard sandy paste, light pinkish grey to mid grey orange surface and core. Surface feel is rough, sherd fracture is fine. Inclusions are fairly sorted, and mainly includes sandy grits (size <0.5 mm; freq. <5%).

Fabric 53 Hard paste, mid grey pink to grey brown surface and mid pinkish brown core. Surface feel is smooth, sherd fracture is irregular. Inclusions have very poor to very good sorting, and includes dark mica (size <0.5 mm; freq. <5%), quartz/quartzite (size <0.5-2.0 mm; freq. 5%), shell (size <0.5 mm; freq. <10%), grog (size 0.5-1.0 mm; freq. <5%).

Fabric 54 Hard paste, mid grey yellow to red surface and mid grey pink core. Surface feel is rough, sherd fracture is fine. Inclusions have poor to very good sorting, and includes white mica (size <0.5 mm; freq. <5%), dark mica (size 0.5 mm; freq. <5%), and quartz/quartzite (size 0.5-1.0 mm; freq. 5%).

Fabric 55 Soft paste, dull yellow grey surface and dark brown grey core. Surface feel is smooth, sherd fracture is fine. Inclusions have very poor to poor sorting, and includes quartz/quartzite (size 0.5-1.0 mm; freq. < 5%), and shell (size <0.5-2.0 mm; freq. 5%).

Fabric 56 Soft fine paste, mid yellowish grey surface and core. Surface feel is smooth, sherd fracture is fine. Inclusions are fairly sorted, and includes quartz/quatzite (size <0.5-1.0 mm; freq. <5%), and shell (size <0.5 mm; freq. 5%).

Fabric 57 Soft fine paste, light orange yellow surface and core. Surface feel is smooth, sherd fracture is fine. Inclusions have very poor to fair sorting, and includes quartz/quartzite (size 0.5-3.0 mm; freq. 5%), and shell (size <0.5 mm; freq. 5%).

Fabric 58 Medium hard paste, dark orange to yellow grey surface and mid brown grey core. Surface feel is smooth, sherd fracture is fine. Inclusions have very poor to good sorting, and includes white mica (size <0.5 mm; freq. <5%); quartz/quartzite (size 0.5 mm; freq. <5%), shell (size <0.5-5.0 mm; freq. 10-15%), and grog (size 0.5-3.0 mm; freq. <5%).

Fabric 59 Hard paste, light grey yellow to mid brown grey surface and mid pinkish grey core. Surface feel is smooth, sherd fracture is fine. Inclusions have poor to very good sorting, and includes white mica (size <0.5 mm; freq. 5%), quartz/quartzite (size <0.5mm; freq. 5%), shell (size <0.5 mm; freq. 5%), and unidentified transparent crystals (size <0.5 mm; freq. 5%).

Fabric 60 Hard paste, light creamy orange surface and light grey orange core. Surface feel is smooth, sherd fracture is fine. Inclusions have very poor to very good sorting, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-2.0 mm; freq. <10%), shell (size >3.0 mm; freq. <5%), and grog (size <0.5 mm; freq. <5%).

Fabric 61 Hard coarse paste, mid yellow grey surface and core. Surface feel is rough, sherd fracture is irregular. Inclusions have fair to good sorting, and includes dark mica (size <0.5 mm; freq. 5%), and quartz/quartzite (size <0.5-2.0 mm; freq. 10%).

Fabric 62 Soft paste, light grey cream to grey orange surface and core. Surface feel is rough, sherd fracture is fine. Inclusions have poor to very good sorting, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-2.0 mm; freq. <5%), and sandy grits (size <0.5 mm; freq. <5%).

Fabric 63 Hard fine paste, dark brown grey surface and mid pinkish grey core. Surface feel is smooth, sherd fracture is irregular. Inclusions have poor to good sorting, and includes quartz/quartzite (size 0.5-2.0 mm; freq. <5%), limestone/oolite (size 0.5-2.0 mm; freq. <5%), unidentified metasediment (size 0.5-1.0 mm; freq. <5%), and sandy grit (size <0.5 mm; freq. <5%). Only one sherd associated with this fabric.

Fabric 64 Hard paste, mid grey brown to brown orange surface and mid greyish yellow core. Surface feel is smooth, sherd fracture is irregular. Inclusions have poor to good sorting, and includes quartz/quartzite (size 0.5-1.0 mm; freq. <5%), limestone/oolite (size 1.0 mm; freq. <5%), unidentified metasediment (size 1.0-2.0 mm; freq. <5%), and sandy grit (size <0.5 mm; freq. <5%).

Fabric 65 Hard coarse paste, mid brownish grey surface to greyish brown core. Surface feel is harsh, sherd fracture is very irregular. Inclusions have very poor to good sorting, and includes white mica (size <0.5; freq. 10%), quartz/quartzite (size >3.0 mm; freq. 5%), black iron ore (size <0.5 mm; freq. 5%), sandy grit (size <0.5; freq. 5%).

Fabric 66 Medium fine paste, light grey yellow surface and core. Surface feel is smooth, sherd fracture is fine. Inclusions have good to very good sorting, and include white mica (size <0.5 mm; freq. 10%), quartz/quartzite (size 0.5-1.0 mm; freq. <5%), and sandy grit (size <0.5 mm; freq. <5%). Note that this fabric group has a high degree of internal variabilty.

Fabric 67 Medium soft coarse paste, mid grey black surface and core. Surface feel is rough, sherd fracture is irregular. Inclusions have fair to good sorting, and include white mica (size <0.5 mm; freq. 20%), quartz/quartzite (size 0.5-2.0 mm; freq. 5%), and sandy grit (size <0.5 mm; freq. 5%).

Fabric 68 Soft sandy paste, light brown orange surface and mid to dark brown grey core. Surface feel is medium rough, sherd fracture is fine. Inclusions have good to very good sorting, and include white mica (size <0.5 mm; freq. 10%), quartz/quartzite (size 0.5-3.0 mm; freq. 5%), and sandy grit (size <0.5 mm; freq. 5%).

Fabric 69 Soft sandy paste, mid brown orange surface and mid to dark orange brown core. Surface feel is rough, sherd fracture is irregular. Inclusion have poor to good sorting, and include white mica (size <0.5 mm; freq. 10%), quartz/quartzite (size 0.5-3.0 mm; freq. 5%), and sandy grits (size 0.5-1.0 mm; freq. 10%).

Fabric 70 Soft sandy paste, light to mid brown orange surface and occsional light to mid grey orange core. Surface feel is medium, sherd fracture is irregular. Inclusions have poor to fair sorting, and include quartz/quartzite (size 0.5-3.0 mm; freq. 5%), black iron ore (size <0.5 mm; freq. 5%), and sandy grit (size 0.5-1.0 mm; freq. 5%).

Fabric 71 Hard coarse paste, mid brown orange surface and core. Surface feel is rough, sherd fracture is irregular. Inclusions have poor to good sorting, and includes quartz/quartzite (size 0.5-3.0 mm; freq. 5%), black iron ore (size <0.5 mm; freq. 5-10%), and sandy grit (size 0.5-1.0 mm; freq. 5%).

Mbuyuni (trench 01)

Fabric 72 Hard fine paste, light to mid brownish orange to grey brown surface and light to dark blue grey core. Surface feel is smooth to rough, sherd fracture is fine to irregular. Inclusions have fair to good sorting, and include quartz/quartzite (size 0.5-2.0 mm; freq. 5-10%), unidentified metasediment (size 0.5-1.0 mm; freq. <5%), shell (size 0.5-1.0 mm; freq. <5%), and grog (size 0.5-1.0 mm; freq. <5%). Differentiation between this fabric group and fabric 75 is poor.

Fabric 73 Medium hard fine paste, light to mid orange brown to brown grey surface and occasional dark grey core. Surface feel is smooth to irregular, sherd fracture is fine to irregular. Inclusions are fairly sorted, and includes quartz/quartzite (size 0.5-2.0 mm; freq. 5-15%), black iron ore (size 0.5-2.0 mm; freq. <5%), red iron ore (size 0.5-1.0 mm; freq. 5%), rounded voids (size 0.5-2.0 mm; freq. 5%), shell (size 0.5-1.0 mm; freq. 5%) and grog (size 0.5-2.0 mm; freq. 5%).

Fabric 74 Hard to soft paste, mid to dark reddish brown to brownish black surface and core. Surface feel is smooth, sherd fracture is irregular. Inclusions have fair to good sorting, and includes quartz/quartzite (size 0.5-2.0 mm; freq. 5%), limestone/calcite ? (size 0.5-3.0 mm; freq. <5%), unidentified metasediment (size 0.5-3.0 mm; freq. <5%), shell (size 0.5-1.0 mm; freq. <5%), and grog (size 0.5-2.0 mm; freq. <5%).

Fabric 75 Hard fine paste, mid to dark brown grey and grey black surface and core. Surface feel is smooth, sherd fracture is irregular. Inclusions have fair to good sorting, and includes white mica (size <0.5 mm; freq.<5%), quartz/quartzite (size 0.5-1.0 mm; freq. <5%), shell (size 0.5-1.0 mm; freq. <5%), and grog (size 0.5-1.0 mm; freq. <5%). Differentiation between this fabric group and fabric 72 is poor.

Fabric 76 Hard fine paste, mid orange brown to orange grey surface and occasional dark grey core. Surface feel is smooth, sherd fracture is irregular. Inclusions have fair to good sorting, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-2.0 mm; freq. <10%), and black iron ore (size 0.5-1.0 mm; freq. <5%).

Fabric 77 Soft paste, mid yellow to grey orange surface and core. Surface feel is rough, sherd fracture is irregular. Inclusions are fairly sorted and includes limestone/oolite (size 0.5-2.0 mm; freq. 10%). Only one sherd has been recovered from this fabric group, and this is very heavily abraded.

Fabric 78 Hard fine paste, dark grey black to grey brown surface and core. Surface feel is smooth to rough, sherd fracture is fine to irregular. Inclusions have fair to good sorting, and includes white mica (size <0.5 mm; freq. <5%), quartz/quartzite (size 0.5-2.0 mm; freq. 10%), black iron ore (size 0.5-1.0 mm; freq. <5%), red iron ore (size 0.5-2.0 mm; freq. <5%), shell (size 0.5-1.0 mm; freq. <5%), and rounded voids (size 0.5-1.0 mm; freq. <5%).

Fabric 79 Soft fine sandy paste, light to mid orange brown surface and light to dark orange grey core. Surface feel is smooth to rough, sherd fracture is fine. Inclusions have fair to good sorting, and includes white mica (size <0.5 mm; freq. <5%), unidentified metasediment (size 0.5-3.0 mm; freq. <5%), shell (size <0.5 mm; freq. <5%), and grog (size 0.5-2.0 mm; freq. 5%).

Appendix D. Decoration Types by Site and Excavated Phase

Contingency table showing frequency of decoration types by site and excavated phase

Type	Mgombani					Chombo				Mteza				Mtsengo									Mbuyuni						
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25	C26	C27	C28	Total
1.0		1		1																									2
2.0			1																										1
4.0			1																										1
5.0			3																										3
6.0			1																										1
7.0			1																										1
8.0			1																										1
9.0			1																										1
11.0			1																										1
12.0			1																										1
13.0		1																											1
14.0			2																										2
15.0			3	3			1																						7
16.0			1																										1
17.0			2																										2
18.0	1																												1
19.0			1																										1
20.0				1																									1
21.0			1																										1
22.0		1		1																									2
23.0			2		1																								3
24.0			3	1																									4
25.0			1																										1
26.0	1																												1
27.0	1		2	3																									6
28.0				1																									1
29.0	1																												1
30.0			1																										1
31.0				1																									1
33.0	1																												1
34.0				1																									1
35.0				1																									1
36.0			2	1																									3
37.0				1																									1
38.0				1																									1
39.0			1	1	1																								3
41.0	2	2	10	3	1																								18
42.0						1																							1
43.0								1																					1
45.0						1	2																						3
46.0								1																					1
48.0							1	1																					2
49.0												1																	1
50.0		1	2	3	1							1																	8
52.0									1																				1
53.0						1		2				1				1	1												6
54.0			1																										1
55.0				1																									1
56.0		1																											1
58.0	1														2														3
59.0			8			6	1																						15
60.0			1																										1
61.0		1	1	4																									6
62.0		1	2																										3
63.0		1																											1
64.0								2																					2
65.0			2			2		1																					5
66.0		1																											1
67.0		1	1																										2
68.0		1																											1
69.0						1								1															2
70.0				4																						2	1		7
71.0							3	1					3																7
72.0				1																									1
74.0						1																							1
75.0		1	1	2			1																						5
76.0				2			1																						3
77.0							2																						2
78.0	1																												1
79.0				2																									2
80.0						1	12	4																					17
81.0							5																						5
82.0							1																						1
83.0		1						2																					3
84.0				1		1	1	1																					4
85.0		1		2			1	3																					7
86.0								1																					1
87.0			1			1	1																						3
88.0		1	1										1																3
89.0			1				1																						2
90.0						1							1																2
91.0		1	2	2																									5
92.0				1			2	1					1																5
93.0		2	3	4		1	17	7	1			1	4			1	1									1			43
94.0				3		4	5	8					1																21

Type	Mgombani					Chombo				Mteza				Mtsengo									Mbuyuni						
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25	C26	C27	C28	Total
95.0			1	1			1																						3
96.0						1	1	1																					3
97.0				1		2	7	1	1																				12
98.0						1	1	1																					3
99.0						1	3	1																					5
101.0				1		1	3	3	1																				9
102.0						5	3	5																					13
103.0						1		3																					4
104.0							1	1																					2
105.0						1																							1
106.0		1	1	2			1	2																					7
107.0						1																							1
108.0			1	2				1				1					1												6
109.0							1																						1
110.0				1			2	6																					9
111.0																											1		1
112.0									2																				2
113.0								1																					1
114.0				1																									1
115.0							1																						1
116.0			1			1																							2
117.0		1																											1
118.0		1	1	2																									4
119.0			1	1																									2
120.0						1		2																					3
121.0														1															1
122.0	1																												1
123.0		1		1								1																	3
124.0							1	1					1																3
125.0				2				1																					3
126.0														1													2		3
127.0	2	2	1	4			2	5					1												1				18
128.0				1			4	13	2	1		3	2																26
129.0			1	3		4	24	19	1	1		7	1																61
130.0								1																					1
131.0	2	1		4			1					1																	9
132.0																2	1												3
133.0	1																												1
134.0				1		2		4																					7
135.0			1																		1								2
136.0																1		5	1	1									8
137.0						1																							1
138.0							1	3				2	1																7
140.0	1	1	1			3	1						1																8
141.0			7	10	1	1	7	11	4	1		4	3		1	1	2									2			55
142.0		1										1																	2
143.0			7	8			1	3	4			1		1		1									2				28
144.0				5		1	1	2	5	1		1	4		1														21
145.0		5	3	3			1	8	2	1		3	1																27
146.0						1	1		1																				3
147.0				2			1	2		4		4																	13
148.0				1																									1
149.0			1																										1
150.0			1																										1
151.0														1															1
152.0									1								1												2
153.0									2																				2
154.0				1																									1
155.0		1		2																									3
157.0						1	1					1															1		4
158.0																1													1
159.0		1					2	7	4	3	1	6	5				1	1				1							32
160.0				1																									1
161.0									1			1								1									3
162.0				1	1		1			2			1					1	2			1							10
163.0				1	1	1	1									1			2										7
164.0								2	1			1		4	1	8	8	3	3			1							32
165.0								1																					1
166.0												1			7			1		1									10
167.0															1		1												2
168.0																1	1												2
169.0						1		1								2													4
170.0		1	3	2		4	3	6	1			7	1		2	1	3												34
171.0	6	9	17	52	2	15	60	94	28	14	1	38	15	3	20	28	12	17	4	3	3	5	2		3	3		1	455
172.0																1													1
173.0																	2		1							1			4
174.0	1	4	4					3	1	1		1	1						1										17
175.0			4	7	1		1			2		1					1	1			2	1							21
175.5				1																									1
176.0										1															1				2
177.0														1															1
177.5	1		1	1						1		1	1		2	1		2	1										12
178.0			5	3		4	1					2																	15
179.0			5	6			1	1			1		3																17
180.0			1	1			1						1																4
181.0				1									1																2
182.0				1											1			2											4
183.0		1																											1
184.0								1																					1
185.0		2	4	1		9	7	5				1	2		2	3	1			1	3			2	7		2		52
186.0								1																					1
187.0							1								1			1											3
188.0							1	1										2											4
189.0								1																			1		2
191.0													2																2
192.0													1																1
193.0							1						2	2	2	23	11	26	9	1	7	2		6	50	41	64	18	265

Type	Mgombani					Chombo				Mteza				Mtsengo									Mbuyuni						
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25	C26	C27	C28	Total
195.0																1													1
196.0						3	1	3					5		4			5			4			1	3	1	2		32
197.0			1			1		2					2	2	5	2	5	2	1										23
198.0																	2	2		1				1	14	9	18	2	49
199.0																										1	1		2
200.0																									1				1
201.0																										1			1
202.0			1							1								1		2									5
203.0													1				1					1		3	22	5			33
204.0																								2	2		1		5
205.0															1														1
206.0																										1			1
207.0																									1		1		2
208.0													2																2
209.0													2														1		3
210.0																3													3
211.0																											1		1
212.0													1					1											2
213.0																									1				1
214.0																	1												1
215.0													1																1
217.0																								1	1				2
219.0				1																									1
220.0				1																					1			1	3
221.0													3															2	5
222.0																									1				1
223.0																								1	7	2	1		11
225.0													1												4	1	9	1	16
225.5													1																1
225.6													1																1
226.0																						1							1
227.0																						1							1
229.0																									1				1
230.0																		1											1
231.0																											1		1
232.0																								1					1
233.0																		1											1
234.0																	1												1
235.0																											1		1
236.0																		1											1
237.0																									1				1
238.0																											1		1
239.0																											2		2
240.0				1												1													2
241.0										1		1														1			3
242.0													1				1												2
243.0								1																					1
244.0																		1											1
245.0																1										1			2
246.0																1											2		3
247.0																		2					1						3
248.0															1		1	2						3	9	3			19
249.0														1	1	1													3
250.0													1												1		1	1	4
251.0																								1					1
252.0																											1		1
253.0															2	4	4										3	1	14
254.0																									1				1
255.0																									1				1
256.0																1													1
257.0															1														1
258.0															1	1	1												3
259.0																	1												1
260.0													1												1				2
261.0																			1										1
262.0															1														1
263.0																								1					1
264.0																								1					1
265.0																									2	1	1		4
266.0																												1	1
267.0																								1	2				3
268.0																									1				1
269.0															1														1
270.0																								1					1
271.0																									2	1			3
272.0																									1				1
273.0															1											1			2
274.0																									1				1
275.0																									1				1
276.0																									1				1
277.0																									2				2
278.0																									1				1
279.0																									1				1
280.0																											1		1
Plain	14	20	52	63	23	33	75	182	140	26	9	143	78	24	113	124	140	158	40	24	61	42	19	47	108	59	69	16	1902
Total	38	73	197	258	33	123	287	449	204	61	12	238	163	42	175	217	206	239	66	35	81	56	22	73	260	138	190	44	3980

Appendix E. Correspondence Analysis Statistics: Decoration Type by Phase

Correspondence Analysis statistics: decoration type by phase

Component	Iterations	Norm	Eigen value	% Inertia	Cumulative
1	24	0.065	0.480616	13.6	13.6
2	52	0.077	0.303457	8.6	22.2
3	115	0.092	0.250148	7.1	29.2

Qlt = Measure of plot quality (‰)
Mass = Weight of individual variables (relative to frequency of incidences)
Inr = Contribution to total inertia (‰)
Cor = Relative contribution to inertia (‰): contribution of specific axis to the inertia of a specific variable
Ctr = Absolute contribution to inertia (‰): contribution of specific variable to the inertia of a specific axis

• = Inertia Outliers

Phase	Qlt	Mass	Inr	Comp1	Cor	Ctr	Comp2	Cor	Ctr	Comp3	Cor	Ctr
C1	164	10	63	709	21	10	-762	25	18	1661	118	105
C2	185	18	55	986	91	37	-970	88	57	232	5	4
C3	743	49	75	1094	223	123	-1628	495	432	366	25	27
C4	339	65	53	860	254	100	-494	84	52	-49	1	1
C5	63	8	15	281	13	1	-292	14	2	476	36	8
C6	213	31	46	682	88	30	191	7	4	-790	118	77
C7	608	72	48	699	210	73	454	88	49	-850	310	208
C8	489	113	32	457	211	49	402	164	60	-336	114	51
C9	115	51	23	108	7	1	344	75	20	228	33	11
C10	45	15	25	376	24	5	322	18	5	115	2	1
C11	33	3	2	86	3	0	177	11	0	228	19	1
C12	179	60	15	232	60	7	304	103	18	120	16	3
C13	49	41	53	68	1	0	336	25	15	-328	24	18
C14	194	11	57	-323	5	2	762	30	20	1743	158	128
C15	262	44	39	-146	7	2	520	85	39	736	170	95
C16	155	55	32	-300	43	10	273	36	13	396	76	34
C17	222	52	20	-272	55	8	266	53	12	392	114	32
C18	233	60	30	-401	93	20	264	40	14	418	100	42
C19	84	17	22	-358	28	4	212	10	2	462	46	14
C20	68	9	22	-202	5	1	307	11	3	682	53	16
C21	89	20	8	-280	57	3	119	10	1	175	22	2
C22	45	14	23	-179	6	1	288	15	4	378	25	8
C23	61	6	9	-159	4	0	367	22	2	457	34	5
C24	91	18	48	-888	85	30	-213	5	3	-100	1	1
C25	613	65	57	-1163	435	184	-573	105	71	-475	72	59
C26	500	35	27	-1075	416	83	-422	64	20	-240	21	8
C27	560	48	55	-1328	436	175	-577	82	52	-412	42	32
C28	199	11	34	-1294	156	39	-498	23	9	-467	20	10

Average Type QLT: 236

Type	Qlt	Mass	Inr	Comp1	Cor	Ctr	Comp2	Cor	Ctr	Comp3	Cor	Ctr
t1	220	1	2	1338	109	2	-1343	109	3	169	2	0
t101	777	2	2	827	290	3	512	111	2	-941	376	8
t102	468	3	5	872	130	5	591	60	4	-1273	278	21
t103	296	1	2	747	93	1	620	64	1	-914	139	3
t104	583	1	1	841	151	1	763	124	1	-1201	308	3
t105	116	0	2	991	31	1	333	4	0	-1595	81	3
t106	622	2	1	1122	451	5	-618	137	2	-306	34	1
t107	116	0	2	991	31	1	333	4	0	-1595	81	3
t108	354	2	1	784	243	2	-512	104	1	134	7	0
t109	360	0	1	1016	80	1	810	51	1	-1715	228	3
t11	617	0	1	1584	131	1	-2969	459	7	717	27	1
t110	442	2	2	808	171	3	556	81	2	-851	190	7
t111	274	0	1	-1908	183	2	-1062	57	1	-839	35	1
t112	32	1	5	163	1	0	610	20	1	442	11	1
t113	181	0	1	666	56	0	716	65	0	-686	60	0
t114	166	0	1	1247	108	1	-912	58	1	-112	1	0
t115	360	0	1	1016	80	1	810	51	1	-1715	228	3
t116	295	1	2	1288	137	2	-1318	143	3	-439	16	0
t117	101	0	4	1429	38	1	-1775	59	3	449	4	0
t118	618	1	2	1377	252	4	-1642	358	9	236	7	0
t119	741	1	1	1416	254	2	-1940	476	6	303	12	0
t12	617	0	1	1584	131	1	-2969	459	7	717	27	1
t120	294	1	1	774	92	1	588	53	1	-989	150	3
t121	151	1	13*	-459	2	0	1368	20	3	3469	128	24
t122	134	0	7	1029	10	1	-1398	19	2	3307	105	11
t123	181	1	2	1006	117	2	-716	59	1	188	4	0
t124	449	1	1	596	84	1	707	118	1	-1024	247	3
t125	196	1	1	1054	162	2	-369	20	0	-303	13	0
t126	130	1	4	-1425	108	3	-252	3	0	597	19	1
t127	336	5	4	849	261	7	-457	75	3	-40	1	0
t128	524	7	4	618	178	5	624	182	8	-595	165	9
t129	778	15	11	812	270	21	561	129	16	-961	379	57
t13	101	0	4	1429	38	1	-1775	59	3	449	4	0
t130	181	0	1	666	56	0	716	65	0	-686	60	0
t131	254	2	5	1093	144	6	-763	70	4	570	39	3
t132	107	1	2	-412	18	0	477	24	1	775	65	2
t133	134	0	7	1029	10	1	-1398	19	2	3307	105	11
t134	329	2	2	842	146	3	374	29	1	-864	154	5
t135	156	1	2	593	22	0	-1384	117	3	526	17	1
t136	150	4	10	-510	31	2	465	25	3	892	94	13
t137	116	0	2	991	31	1	333	4	0	-1595	81	3
t138	381	2	1	543	106	1	661	158	3	-570	117	2
t14	617	1	3	1584	131	3	-2969	459	15	717	27	1
t140	196	2	4	1017	149	4	-467	31	1	-337	16	1
t141	664	14	3	687	569	14	-161	31	1	-230	64	3
t142	76	1	5	885	47	2	-619	23	1	337	7	0
t143	535	7	5	745	243	8	-800	280	15	167	12	1
t144	175	5	3	548	131	3	261	30	1	-182	14	1
t145	366	7	5	889	310	11	-370	54	3	-76	2	0
t146	282	1	1	723	83	1	584	54	1	-956	145	3
t147	77	7	14*	647	56	6	373	19	3	-119	2	0
t148	166	0	1	1247	108	1	-912	58	1	-112	1	0
t149	617	0	1	1584	131	1	-2969	459	7	717	27	1
t15	728	2	3	1359	317	7	-1547	411	14	15	0	0
t150	617	0	1	1584	131	1	-2969	459	7	717	27	1
t151	151	1	13*	-459	2	0	1368	20	3	3469	128	24
t152	77	1	2	-111	1	0	539	33	1	605	42	1
t153	32	1	5	163	1	0	610	20	1	442	11	1
t154	166	0	1	1247	108	1	-912	58	1	-112	1	0
t155	265	1	3	1308	144	3	-1199	121	4	75	0	0
t157	235	1	1	110	3	0	155	6	0	-981	227	4
t158	59	1	2	-425	10	0	481	13	0	777	35	1
t159	218	8	5	373	69	2	530	139	7	-144	10	1

Type	Qlt	Mass	Inr	Comp1	Cor	Ctr	Comp2	Cor	Ctr	Comp3	Cor	Ctr
t16	617	0	1	1584	131	1	-2969	459	7	717	27	1
t160	166	0	1	1247	108	1	-912	58	1	-112	1	0
t161	49	2	7	73	0	0	563	20	2	672	29	3
t162	26	5	9	204	6	0	281	12	1	225	8	1
t163	15	4	8	317	13	1	130	2	0	16	0	0
t164	418	8	8	-318	28	2	613	102	10	1029	288	34
t165	181	0	1	666	56	0	716	65	0	-686	60	0
t166	196	5	16*	-194	3	0	805	56	11	1259	136	32
t167	191	1	1	-294	9	0	699	51	1	1113	130	2
t168	117	1	1	-405	20	0	475	27	0	773	71	1
t169	53	2	3	202	7	0	503	41	2	-182	5	0
t17	617	1	3	1584	131	3	-2969	459	15	717	27	1
t170	374	9	3	599	331	6	126	15	0	-174	28	1
t171	815	114	13*	501	649	60	227	133	19	-113	33	6
t172	59	1	2	-425	10	0	481	13	0	777	35	1
t173	80	2	5	-706	53	2	132	2	0	488	25	2
t174	422	4	5	925	194	8	-914	189	12	414	39	3
t175	360	5	5	759	188	6	-689	155	8	236	18	1
t175.5	166	0	1	1247	108	1	-912	58	1	-112	1	0
t176	27	1	5	-561	16	1	-242	3	0	-375	7	1
t177	151	1	13*	-459	2	0	1368	20	3	3469	128	24
t177.5	307	3	2	198	17	0	6	0	0	827	291	8
t178	517	4	5	1155	295	10	-957	203	11	-293	19	1
t179	437	4	6	1032	229	9	-982	207	14	-62	1	0
t18	134	0	7	1029	10	1	-1398	19	2	3307	105	11
t180	430	1	1	988	270	2	-619	106	1	-445	55	1
t181	71	1	3	677	51	1	-158	3	0	-391	17	1
t182	111	2	3	-25	0	0	237	10	0	747	100	4
t183	101	0	4	1429	38	1	-1775	59	3	449	4	0
t184	181	0	1	666	56	0	716	65	0	-686	60	0
t185	268	13	5	168	23	1	-149	18	1	-533	228	15
t186	181	0	1	666	56	0	716	65	0	-686	60	0
t187	118	2	2	80	1	0	735	110	3	188	7	0
t188	94	1	1	134	4	0	614	82	1	-190	8	0
t189	155	1	1	-621	60	0	-173	5	0	-763	90	1
t19	617	0	1	1584	131	1	-2969	459	7	717	27	1
t191	35	1	7	106	0	0	596	15	1	-670	19	2
t192	35	1	3	106	0	0	596	15	1	-670	19	1
t193	865	67	44*	-1311	730	238	-492	103	53	-274	32	20
t195	59	1	2	-425	10	0	481	13	0	777	35	1
t196	107	16	8	-325	59	4	229	29	3	-185	19	2
t197	384	6	4	-98	4	0	521	111	5	808	268	15
t198	848	12	15*	-1609	598	66	-831	160	28	-625	90	19
t199	373	1	2	-1726	260	3	-921	74	1	-667	39	1
t2	617	0	1	1584	131	1	-2969	459	7	717	27	1
t20	166	0	1	1247	108	1	-912	58	1	-112	1	0
t200	338	0	1	-1671	195	1	-1054	78	1	-964	65	1
t201	116	0	2	-1544	86	1	-780	22	1	-494	9	0
t202	40	3	15*	199	2	0	-170	1	0	890	37	8
t203	478	8	16*	-1480	312	38	-810	93	18	-712	72	17
t204	315	1	4	-1560	221	6	-795	57	3	-639	37	2
t205	139	1	3	-203	2	0	929	40	1	1457	98	4
t206	116	0	2	-1544	86	1	-780	22	1	-494	9	0
t207	637	1	1	-1790	397	3	-1058	139	2	-901	101	2
t208	35	1	7	106	0	0	596	15	1	-670	19	2
t209	70	2	5	-566	26	1	43	0	0	-726	43	3
t21	617	0	1	1584	131	1	-2969	459	7	717	27	1
t210	59	2	7	-425	10	1	481	13	1	777	35	4
t211	274	0	1	-1908	183	2	-1062	57	1	-839	35	1
t212	37	1	3	-233	6	0	531	30	1	76	1	0
t213	338	0	1	-1671	195	1	-1054	78	1	-964	65	1
t214	52	0	1	-385	8	0	469	12	0	769	32	1
t215	35	1	3	106	0	0	596	15	1	-670	19	1

Type	Qlt	Mass	Inr	Comp1	Cor	Ctr	Comp2	Cor	Ctr	Comp3	Cor	Ctr
t217	185	1	2	-1473	132	2	-728	32	1	-589	21	1
t219	166	0	1	1247	108	1	-912	58	1	-112	1	0
t22	220	1	2	1338	109	2	-1343	109	3	169	2	0
t220	157	1	3	-761	46	1	-961	74	2	-675	37	1
t221	48	3	16*	-680	21	2	-10	0	0	-781	27	6
t222	338	0	1	-1671	195	1	-1054	78	1	-964	65	1
t223	620	3	5	-1634	394	15	-946	132	8	-799	94	7
t225	624	4	8	-1698	403	24	-930	121	11	-845	100	11
t225.5	35	1	3	106	0	0	596	15	1	-670	19	1
t225.6	35	1	3	106	0	0	596	15	1	-670	19	1
t226	12	1	10	-251	1	0	509	4	0	740	8	1
t227	12	1	10	-251	1	0	509	4	0	740	8	1
t229	338	0	1	-1671	195	1	-1054	78	1	-964	65	1
t23	314	2	9	1194	67	4	-2161	218	23	791	29	4
t230	78	1	2	-572	21	0	466	14	0	821	43	1
t231	274	0	1	-1908	183	2	-1062	57	1	-839	35	1
t232	34	1	8	-1274	30	2	-401	3	0	-215	1	0
t233	78	1	2	-572	21	0	466	14	0	821	43	1
t234	52	0	1	-385	8	0	469	12	0	769	32	1
t235	274	0	1	-1908	183	2	-1062	57	1	-839	35	1
t236	78	1	2	-572	21	0	466	14	0	821	43	1
t237	338	0	1	-1671	195	1	-1054	78	1	-964	65	1
t238	274	0	1	-1908	183	2	-1062	57	1	-839	35	1
t239	274	1	3	-1908	183	4	-1062	57	2	-839	35	1
t24	754	1	3	1500	199	5	-2455	532	20	510	23	1
t240	44	1	2	411	23	0	-215	6	0	333	15	0
t241	5	1	2	-218	4	0	109	1	0	-18	0	0
t242	31	1	3	-140	2	0	532	29	1	50	0	0
t243	181	0	1	666	56	0	716	65	0	-686	60	0
t244	78	1	2	-572	21	0	466	14	0	821	43	1
t245	94	1	3	-985	90	2	-149	2	0	142	2	0
t246	231	1	2	-1414	193	3	-548	29	1	-300	9	0
t247	45	2	11	-455	8	1	528	11	1	847	27	4
t248	460	5	6	-1328	366	18	-563	66	5	-365	28	3
t249	327	2	6	-362	9	0	926	61	4	1901	256	22
t25	617	0	1	1584	131	1	-2969	459	7	717	27	1
t250	341	1	2	-1333	211	4	-610	44	1	-855	87	3
t251	34	1	8	-1274	30	2	-401	3	0	-215	1	0
t252	274	0	1	-1908	183	2	-1062	57	1	-839	35	1
t253	206	4	4	-802	162	5	111	3	0	402	41	2
t254	338	0	1	-1671	195	1	-1054	78	1	-964	65	1
t255	338	0	1	-1671	195	1	-1054	78	1	-964	65	1
t256	59	1	2	-425	10	0	481	13	0	777	35	1
t257	139	1	3	-203	2	0	929	40	1	1457	98	4
t258	264	1	1	-338	20	0	627	69	1	1001	175	3
t259	52	0	1	-385	8	0	469	12	0	769	32	1
t26	134	0	7	1029	10	1	-1398	19	2	3307	105	11
t260	149	1	3	-783	69	1	-229	6	0	-817	75	3
t261	21	1	8	-510	4	0	371	2	0	910	14	2
t262	139	1	3	-203	2	0	929	40	1	1457	98	4
t263	34	1	8	-1274	30	2	-401	3	0	-215	1	0
t264	34	1	8	-1274	30	2	-401	3	0	-215	1	0
t265	762	1	2	-1699	486	6	-988	164	3	-815	112	3
t266	58	1	13*	-1860	39	4	-918	9	1	-949	10	2
t267	302	1	3	-1539	200	4	-836	59	2	-714	43	2
t268	338	0	1	-1671	195	1	-1054	78	1	-964	65	1
t269	139	1	3	-203	2	0	929	40	1	1457	98	4
t27	638	2	3	1323	219	5	-1679	352	14	734	67	3
t270	34	1	8	-1274	30	2	-401	3	0	-215	1	0
t271	470	1	2	-1629	295	4	-963	103	2	-807	72	2
t272	338	0	1	-1671	195	1	-1054	78	1	-964	65	1
t273	84	1	3	-874	64	2	75	0	0	481	19	1
t274	338	0	1	-1671	195	1	-1054	78	1	-964	65	1

Type	Qlt	Mass	Inr	Comp1	Cor	Ctr	Comp2	Cor	Ctr	Comp3	Cor	Ctr
t275	338	0	1	-1671	195	1	-1054	78	1	-964	65	1
t276	338	0	1	-1671	195	1	-1054	78	1	-964	65	1
t277	338	1	2	-1671	195	3	-1054	78	2	-964	65	2
t278	338	0	1	-1671	195	1	-1054	78	1	-964	65	1
t279	338	0	1	-1671	195	1	-1054	78	1	-964	65	1
t28	166	0	1	1247	108	1	-912	58	1	-112	1	0
t280	274	0	1	-1908	183	2	-1062	57	1	-839	35	1
t29	134	0	7	1029	10	1	-1398	19	2	3307	105	11
t291	633	478	16*	-132	145	17	154	198	37	187	290	66
t30	617	0	1	1584	131	1	-2969	459	7	717	27	1
t31	166	0	1	1247	108	1	-912	58	1	-112	1	0
t33	134	0	7	1029	10	1	-1398	19	2	3307	105	11
t34	166	0	1	1247	108	1	-912	58	1	-112	1	0
t35	166	0	1	1247	108	1	-912	58	1	-112	1	0
t36	782	1	2	1472	224	3	-2283	538	13	441	20	1
t37	166	0	1	1247	108	1	-912	58	1	-112	1	0
t38	166	0	1	1247	108	1	-912	58	1	-112	1	0
t39	221	1	3	1081	71	2	-1475	133	5	514	16	1
t4	617	0	1	1584	131	1	-2969	459	7	717	27	1
t41	926	5	10	1384	239	18	-2184	596	71	849	90	13
t42	116	0	2	991	31	1	333	4	0	-1595	81	3
t43	181	0	1	666	56	0	716	65	0	-686	60	0
t45	485	1	2	1007	116	2	651	48	1	-1675	320	8
t46	181	0	1	666	56	0	716	65	0	-686	60	0
t48	583	1	1	841	151	1	763	124	1	-1201	308	3
t49	29	1	2	341	7	0	537	18	0	225	3	0
t5	617	1	4	1584	131	4	-2969	459	22	717	27	2
t50	574	2	3	1137	238	5	-1307	315	11	339	21	1
t52	32	1	3	163	1	0	610	20	1	442	11	0
t53	179	2	1	309	40	0	542	123	1	-199	17	0
t54	617	0	1	1584	131	1	-2969	459	7	717	27	1
t55	166	0	1	1247	108	1	-912	58	1	-112	1	0
t56	101	0	4	1429	38	1	-1775	59	3	449	4	0
t58	210	1	4	208	2	0	154	1	0	2073	207	13
t59	381	4	11	1309	172	13	-1396	195	24	-370	14	2
t6	617	0	1	1584	131	1	-2969	459	7	717	27	1
t60	617	0	1	1584	131	1	-2969	459	7	717	27	1
t61	473	2	3	1334	224	6	-1398	247	10	120	2	0
t62	666	1	3	1533	167	4	-2571	471	16	628	28	1
t63	101	0	4	1429	38	1	-1775	59	3	449	4	0
t64	181	1	1	666	56	0	716	65	1	-686	60	1
t65	312	1	3	1163	174	4	-911	107	3	-488	31	1
t66	101	0	4	1429	38	1	-1775	59	3	449	4	0
t67	466	1	3	1507	128	2	-2372	318	9	583	19	1
t68	101	0	4	1429	38	1	-1775	59	3	449	4	0
t69	54	1	9	266	2	0	851	24	2	937	29	4
t7	617	0	1	1584	131	1	-2969	459	7	717	27	1
t70	133	2	3	-1	0	0	-896	118	5	-325	15	1
t71	335	2	3	576	53	1	705	80	3	-1120	202	9
t72	166	0	1	1247	108	1	-912	58	1	-112	1	0
t74	116	0	2	991	31	1	333	4	0	-1595	81	3
t75	609	1	2	1305	340	4	-1151	265	5	-154	5	0
t76	257	1	2	1170	185	2	-338	15	0	-646	56	1
t77	360	1	2	1016	80	1	810	51	1	-1715	228	6
t78	134	0	7	1029	10	1	-1398	19	2	3307	105	11
t79	166	1	2	1247	108	2	-912	58	1	-112	1	0
t8	617	0	1	1584	131	1	-2969	459	7	717	27	1
t80	552	4	8	932	133	8	760	89	8	-1466	330	37
t81	360	1	5	1016	80	3	810	51	3	-1715	228	15
t82	360	0	1	1016	80	1	810	51	1	-1715	228	3
t83	106	1	2	920	94	1	-114	1	0	-308	11	0
t84	608	1	1	980	282	2	237	16	0	-1027	310	4
t85	380	2	2	991	299	4	-92	3	0	-507	78	2

Type	Qlt	Mass	Inr	Comp1	Cor	Ctr	Comp2	Cor	Ctr	Comp3	Cor	Ctr
t86	181	0	1	666	56	0	716	65	0	-686	60	0
t87	400	1	1	1197	225	2	-608	58	1	-864	117	2
t88	302	1	2	1040	108	2	-1383	191	5	166	3	0
t89	413	1	1	1300	225	2	-1079	155	2	-499	33	0
t9	617	0	1	1584	131	1	-2969	459	7	717	27	1
t90	136	1	2	548	23	0	464	16	0	-1132	97	3
t91	837	1	2	1419	292	5	-1907	529	15	332	16	1
t92	562	1	1	810	207	2	404	52	1	-979	303	5
t93	626	11	6	793	309	14	156	12	1	-789	305	27
t94	756	5	4	867	288	8	427	70	3	-1021	399	22
t95	629	1	1	1283	366	3	-1024	233	3	-370	30	0
t96	576	1	1	891	155	1	620	75	1	-1332	346	5
t97	581	3	4	931	176	5	563	64	3	-1296	341	20
t98	576	1	1	891	155	1	620	75	1	-1332	346	5
t99	634	1	2	941	157	2	696	86	2	-1485	391	11

Average Unit QLT: 294

Variable Projections

Non-Zero Weight Type Coordinates in Input Order

Phase	Component1	Component2	Component3
C1	1.022533	-1.383658	3.321355
C2	1.422640	-1.760909	0.463850
C3	1.577686	-2.955212	0.731920
C4	1.240661	-0.897602	-0.097297
C5	0.405514	-0.529352	0.951664
C6	0.984005	0.347522	-1.580239
C7	1.008971	0.824504	-1.700216
C8	0.658894	0.729863	-0.671988
C9	0.155873	0.623775	0.456332
C10	0.543076	0.584936	0.229261
C11	0.123503	0.320504	0.455393
C12	0.334607	0.551537	0.239842
C13	0.098798	0.609653	-0.655064
C14	-0.465355	1.382585	3.483970
C15	-0.210154	0.943588	1.471084
C16	-0.432055	0.495593	0.791928
C17	-0.391977	0.482888	0.783422
C18	-0.578598	0.479663	0.835259
C19	-0.516741	0.384758	0.924379
C20	-0.290993	0.556718	1.362734
C21	-0.404291	0.215463	0.349807
C22	-0.258099	0.523163	0.754905
C23	-0.229426	0.666101	0.912921
C24	-1.281258	-0.387078	-0.200023
C25	-1.678252	-1.039993	-0.949346
C26	-1.550985	-0.765886	-0.479764
C27	-1.915275	-1.048291	-0.824315
C28	-1.866386	-0.903773	-0.934615

Non-Zero Weight Unit Coordinates in Input Order

Type	Component1	Component2	Component3
t1	1.930649	-2.438554	0.337357
t101	1.193300	0.929812	-1.881300
t102	1.257149	1.072015	-2.545433
t103	1.077490	1.125803	-1.826565
t104	1.212736	1.385215	-2.400492
t105	1.429204	0.605252	-3.188498
t106	1.618851	-1.121781	-0.612590
t107	1.429204	0.605252	-3.188498
t108	1.130250	-0.929026	0.267062
t109	1.465221	1.471109	-3.428397
t11	2.285528	-5.390122	1.434328
t110	1.165707	1.009240	-1.701768
t111	-2.752867	-1.928574	-1.677173
t112	0.234671	1.106750	0.883348
t113	0.960252	1.299320	-1.372587
t114	1.799405	-1.654983	-0.223597
t115	1.465221	1.471109	-3.428397
t116	1.857366	-2.392435	-0.877085
t117	2.061892	-3.222125	0.898310
t118	1.986558	-2.980553	0.471361
t119	2.042466	-3.522553	0.605366
t12	2.285528	-5.390122	1.434328
t120	1.116569	1.067964	-1.977891
t121	-0.661412	2.484246	6.936813
t122	1.484764	-2.537268	6.611439
t123	1.451261	-1.300497	0.375071
t124	0.859272	1.283842	-2.046582
t125	1.519688	-0.670215	-0.606594
t126	-2.055715	-0.457634	1.194156
t127	1.224974	-0.829024	-0.079234
t128	0.891855	1.133054	-1.188877
t129	1.171119	1.018247	-1.921700
t13	2.061892	-3.222125	0.898310
t130	0.960252	1.299320	-1.372587
t131	1.576305	-1.385541	1.138767
t132	-0.594115	0.866373	1.548666
t133	1.484764	-2.537268	6.611439
t134	1.214117	0.678972	-1.727278
t135	0.856093	-2.512292	1.052345
t136	-0.735334	0.844708	1.784237
t137	1.429204	0.605252	-3.188498
t138	0.783327	1.200200	-1.140560
t14	2.285528	-5.390122	1.434328
t140	1.467170	-0.847694	-0.673572
t141	0.991313	-0.291475	-0.459902
t142	1.277188	-1.123254	0.674405
t143	1.074084	-1.452419	0.333074
t144	0.789859	0.474162	-0.363157
t145	1.281623	-0.671207	-0.150984
t146	1.043032	1.061037	-1.911183
t147	0.932864	0.677480	-0.238570
t148	1.799405	-1.654983	-0.223597
t149	2.285528	-5.390122	1.434328
t15	1.960003	-2.809172	0.029114
t150	2.285528	-5.390122	1.434328
t151	-0.661412	2.484246	6.936813
t152	-0.160452	0.978874	1.210338
t153	0.234671	1.106750	0.883348
t154	1.799405	-1.654983	-0.223597
t155	1.886901	-2.177363	0.150372
t157	0.158511	0.280851	-1.960892
t158	-0.613385	0.874061	1.554335
t159	0.537317	0.962085	-0.287373
t16	2.285528	-5.390122	1.434328

Type	Component1	Component2	Component3
t160	1.799405	-1.654983	-0.223597
t161	0.105748	1.022465	1.343146
t162	0.293979	0.509820	0.450119
t163	0.457730	0.236382	0.032262
t164	-0.458949	1.111997	2.057565
t165	0.960252	1.299320	-1.372587
t166	-0.279531	1.461698	2.517263
t167	-0.424439	1.269155	2.224776
t168	-0.584480	0.862529	1.545831
t169	0.290671	0.913173	-0.363104
t17	2.285528	-5.390122	1.434328
t170	0.863499	0.227842	-0.347993
t171	0.722855	0.411573	-0.226348
t172	-0.613385	0.874061	1.554335
t173	-1.018522	0.239735	0.976380
t174	1.334844	-1.659748	0.827518
t175	1.094633	-1.250539	0.472663
t175.5	1.799405	-1.654983	-0.223597
t176	-0.808891	-0.438631	-0.748911
t177	-0.661412	2.484246	6.936813
t177.5	0.285221	0.010202	1.653593
t178	1.666191	-1.738148	-0.585369
t179	1.487914	-1.782974	-0.123867
t18	1.484764	-2.537268	6.611439
t180	1.425624	-1.123224	-0.889107
t181	0.975874	-0.286943	-0.781180
t182	-0.035858	0.430654	1.492639
t183	2.061892	-3.222125	0.898310
t184	0.960252	1.299320	-1.372587
t185	0.242532	-0.270367	-1.066266
t186	0.960252	1.299320	-1.372587
t187	0.115717	1.334522	0.374930
t188	0.193985	1.115178	-0.379764
t189	-0.896307	-0.314627	-1.524880
t19	2.285528	-5.390122	1.434328
t191	0.152342	1.081098	-1.338762
t192	0.152342	1.081098	-1.338762
t193	-1.890333	-0.893043	-0.548342
t195	-0.613385	0.874061	1.554335
t196	-0.468734	0.415174	-0.369481
t197	-0.140832	0.945534	1.615403
t198	-2.320926	-1.508779	-1.249717
t199	-2.490131	-1.672246	-1.332727
t2	2.285528	-5.390122	1.434328
t20	1.799405	-1.654983	-0.223597
t200	-2.410973	-1.913509	-1.927161
t201	-2.227395	-1.415919	-0.988282
t202	0.286826	-0.307735	1.779162
t203	-2.135123	-1.469861	-1.422636
t204	-2.250293	-1.442425	-1.277887
t205	-0.293302	1.687314	2.912225
t206	-2.227395	-1.415919	-0.988282
t207	-2.581920	-1.921042	-1.802167
t208	0.152342	1.081098	-1.338762
t209	-0.816061	0.077874	-1.451566
t21	2.285528	-5.390122	1.434328
t210	-0.613385	0.874061	1.554335
t211	-2.752867	-1.928574	-1.677173
t212	-0.336212	0.963120	0.151101
t213	-2.410973	-1.913509	-1.927161
t214	-0.555575	0.850997	1.537327
t215	0.152342	1.081098	-1.338762
t217	-2.124649	-1.320888	-1.178066
t219	1.799405	-1.654983	-0.223597

Type	Component1	Component2	Component3
t22	1.930649	-2.438554	0.337357
t220	-1.097971	-1.744909	-1.349489
t221	-0.981533	-0.017835	-1.562341
t222	-2.410973	-1.913509	-1.927161
t223	-2.356618	-1.716658	-1.597530
t225	-2.448568	-1.688266	-1.689247
t225.5	0.152342	1.081098	-1.338762
t225.6	0.152342	1.081098	-1.338762
t226	-0.362463	0.924109	1.480307
t227	-0.362463	0.924109	1.480307
t229	-2.410973	-1.913509	-1.927161
t23	1.721936	-3.922247	1.580784
t230	-0.824767	0.845142	1.640964
t231	-2.752867	-1.928574	-1.677173
t232	-1.838325	-0.728266	-0.428970
t233	-0.824767	0.845142	1.640964
t234	-0.555575	0.850997	1.537327
t235	-2.752867	-1.928574	-1.677173
t236	-0.824767	0.845142	1.640964
t237	-2.410973	-1.913509	-1.927161
t238	-2.752867	-1.928574	-1.677173
t239	-2.752867	-1.928574	-1.677173
t24	2.163997	-4.456337	1.019847
t240	0.593010	-0.390461	0.665369
t241	-0.313907	0.198648	-0.036147
t242	-0.201617	0.966047	0.099282
t243	0.960252	1.299320	-1.372587
t244	-0.824767	0.845142	1.640964
t245	-1.420390	-0.270929	0.283027
t246	-2.039706	-0.994362	-0.600004
t247	-0.656879	0.957956	1.692723
t248	-1.915491	-1.022397	-0.729722
t249	-0.522700	1.681874	3.801124
t25	2.285528	-5.390122	1.434328
t250	-1.923461	-1.106805	-1.710201
t251	-1.838325	-0.728266	-0.428970
t252	-2.752867	-1.928574	-1.677173
t253	-1.157385	0.201636	0.804419
t254	-2.410973	-1.913509	-1.927161
t255	-2.410973	-1.913509	-1.927161
t256	-0.613385	0.874061	1.554335
t257	-0.293302	1.687314	2.912225
t258	-0.487421	1.137457	2.001296
t259	-0.555575	0.850997	1.537327
t26	1.484764	-2.537268	6.611439
t260	-1.129315	-0.416206	-1.632962
t261	-0.735542	0.672864	1.819149
t262	-0.293302	1.687314	2.912225
t263	-1.838325	-0.728266	-0.428970
t264	-1.838325	-0.728266	-0.428970
t265	-2.450552	-1.792878	-1.629944
t266	-2.682345	-1.666234	-1.897709
t267	-2.220090	-1.518428	-1.427764
t268	-2.410973	-1.913509	-1.927161
t269	-0.293302	1.687314	2.912225
t27	1.909006	-3.047077	1.468217
t270	-1.838325	-0.728266	-0.428970
t271	-2.349780	-1.747646	-1.614201
t272	-2.410973	-1.913509	-1.927161
t273	-1.260348	0.135697	0.961971
t274	-2.410973	-1.913509	-1.927161
t275	-2.410973	-1.913509	-1.927161
t276	-2.410973	-1.913509	-1.927161
t277	-2.410973	-1.913509	-1.927161

Type	Component1	Component2	Component3
t278	-2.410973	-1.913509	-1.927161
t279	-2.410973	-1.913509	-1.927161
t28	1.799405	-1.654983	-0.223597
t280	-2.752867	-1.928574	-1.677173
t29	1.484764	-2.537268	6.611439
t291	-0.190633	0.279522	0.373020
t30	2.285528	-5.390122	1.434328
t31	1.799405	-1.654983	-0.223597
t33	1.484764	-2.537268	6.611439
t34	1.799405	-1.654983	-0.223597
t35	1.799405	-1.654983	-0.223597
t36	2.123487	-4.145076	0.881686
t37	1.799405	-1.654983	-0.223597
t38	1.799405	-1.654983	-0.223597
t39	1.559895	-2.677201	1.028142
t4	2.285528	-5.390122	1.434328
t41	1.996753	-3.965080	1.698094
t42	1.429204	0.605252	-3.188498
t43	0.960252	1.299320	-1.372587
t45	1.453215	1.182490	-3.348431
t46	0.960252	1.299320	-1.372587
t48	1.212736	1.385215	-2.400492
t49	0.492484	0.975616	0.450501
t5	2.285528	-5.390122	1.434328
t50	1.639800	-2.372275	0.677546
t52	0.234671	1.106750	0.883348
t53	0.445539	0.984094	-0.398585
t54	2.285528	-5.390122	1.434328
t55	1.799405	-1.654983	-0.223597
t56	2.061892	-3.222125	0.898310
t58	0.299387	0.279120	4.145296
t59	1.888311	-2.534557	-0.738984
t6	2.285528	-5.390122	1.434328
t60	2.285528	-5.390122	1.434328
t61	1.924174	-2.538696	0.239708
t62	2.210983	-4.667456	1.255656
t63	2.061892	-3.222125	0.898310
t64	0.960252	1.299320	-1.372587
t65	1.677943	-1.654084	-0.976186
t66	2.061892	-3.222125	0.898310
t67	2.173710	-4.306124	1.166319
t68	2.061892	-3.222125	0.898310
t69	0.383896	1.544749	1.874157
t7	2.285528	-5.390122	1.434328
t70	-0.001434	-1.625763	-0.649732
t71	0.830420	1.279420	-2.239152
t72	1.799405	-1.654983	-0.223597
t74	1.429204	0.605252	-3.188498
t75	1.882290	-2.090221	-0.308591
t76	1.688010	-0.612952	-1.291864
t77	1.465221	1.471109	-3.428397
t78	1.484764	-2.537268	6.611439
t79	1.799405	-1.654983	-0.223597
t8	2.285528	-5.390122	1.434328
t80	1.344286	1.379755	-2.930566
t81	1.465221	1.471109	-3.428397
t82	1.465221	1.471109	-3.428397
t83	1.327465	-0.207828	-0.615621
t84	1.413521	0.430175	-2.053270
t85	1.429526	-0.166146	-1.013578
t86	0.960252	1.299320	-1.372587
t87	1.726651	-1.104587	-1.727522
t88	1.499921	-2.510383	0.331292
t89	1.875374	-1.959506	-0.997034

Type	Component1	Component2	Component3
t9	2.285528	-5.390122	1.434328
t90	0.790773	0.843175	-2.263630
t91	2.046352	-3.462467	0.663954
t92	1.168488	0.733531	-1.958348
t93	1.143672	0.283505	-1.576557
t94	1.251214	0.775584	-2.042202
t95	1.850051	-1.857999	-0.739222
t96	1.284892	1.125227	-2.663161
t97	1.342440	1.021613	-2.590718
t98	1.284892	1.125227	-2.663161
t99	1.357024	1.263580	-2.969256

Appendix F. Reordered Contingency Table: Decoration Types by Site and Excavated Phase

Reordered contingency table showing frequency of decoration types by site and excavated phase

Type	Mgombani					Chombo				Mteza				Mtsengo									Mbuyuni						Total
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25	C26	C27	C28	
6.0			1																										1
60.0			1																										1
8.0			1																										1
149.0			1																										1
2.0			1																										1
12.0			1																										1
9.0			1																										1
4.0			1																										1
16.0			1																										1
19.0			1																										1
11.0			1																										1
5.0			3																										3
150.0			1																										1
7.0			1																										1
14.0			2																										2
17.0			2																										2
21.0			1																										1
25.0			1																										1
30.0			1																										1
54.0			1																										1
62.0		1	2																										3
67.0		1	1																										2
24.0			3	1																									4
36.0			2	1																									3
66.0		1																											1
13.0		1																											1
183.0		1																											1
63.0		1																											1
68.0		1																											1
117.0		1																											1
56.0		1																											1
91.0		1	2	2																									5
119.0			1	1																									2
41.0	2	2	10	3	1																								18
118.0		1	1	2																									4
15.0			3	3			1																						7
1.0		1		1																									2
22.0		1		1																									2
61.0		1	1	4																									6
27.0	1		2	3																									6
59.0			8			6	1																						15
268.0																									1				1
155.0		1		2																									3
75.0		1	1	2			1																						5
89.0			1				1																						2
116.0			1			1																							2
95.0			1	1			1																						3
20.0				1																									1
154.0				1																									1
219.0				1																									1
55.0				1																									1
35.0				1																									1
175.5				1																									1
37.0				1																									1
34.0				1																									1
38.0				1																									1
160.0				1																									1
31.0				1																									1
79.0				2																									2
148.0				1																									1
72.0				1																									1
114.0				1																									1
28.0				1																									1
87.0			1			1	1																						3
23.0			2		1																								3
76.0				2			1																						3
65.0			2			2		1																					5
178.0			5	3		4	1					2																	15
50.0		1	2	3	1							1																	8
106.0		1	1	2			1	2																					7
131.0	2	1		4			1					1																	9
39.0			1	1	1																								3
125.0				2				1																					3
88.0		1	1										1																3
179.0			5	6			1	1			1		3																17
122.0	1																												1
78.0	1																												1
18.0	1																												1
133.0	1																												1
26.0	1																												1

Type	Mgombani					Chombo				Mteza				Mtsengo									Mbuyuni						
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25	C26	C27	C28	Total
29.0	1																												1
33.0	1																												1
140.0	1	1	1			3	1						1																8
109.0							1																						1
77.0							2																						2
82.0							1																						1
115.0							1																						1
81.0							5																						5
45.0						1	2																						3
123.0		1		1								1																	3
85.0		1		2			1	3																					7
137.0						1																							1
105.0						1																							1
107.0						1																							1
42.0						1																							1
74.0						1																							1
180.0			1	1			1						1																4
84.0				1		1	1	1																					4
99.0						1	3	1																					5
80.0						1	12	4																					17
97.0				1		2	7	1	1																				12
174.0	1	4	4					3	1	1		1	1						1										17
83.0		1						2																					3
98.0						1	1	1																					3
96.0						1	1	1																					3
145.0		5	3	3			1	8	2	1		3	1																27
142.0		1										1																	2
102.0						5	3	5																					13
94.0				3		4	5	8					1																21
127.0	2	2	1	4			2	5					1												1				18
134.0				1		2		4																					7
104.0							1	1																					2
48.0							1	1																					2
101.0				1		1	3	3	1																				9
129.0			1	3		4	24	19	1	1		7	1																61
92.0				1			2	1					1																5
110.0				1			2	6																					9
93.0		2	3	4		1	17	7	1			1	4			1	1									1			43
108.0			1	2				1				1					1												6
120.0						1		2																					3
175.0			4	7	1		1			2		1					1	1			2	1							21
103.0						1		3																					4
143.0			7	8			1	3	4			1		1		1									2				28
146.0						1	1		1																				3
141.0			7	10	1	1	7	11	4	1		4	3		1	1	2									2			55
181.0				1									1																2
43.0								1																					1
46.0								1																					1
243.0								1																					1
86.0								1																					1
184.0								1																					1
64.0								2																					2
130.0								1																					1
186.0								1																					1
113.0								1																					1
165.0								1																					1
147.0				2			1	2		4		4																	13
128.0				1			4	13	2	1		3	2																26
170.0		1	3	2		4	3	6	1			7	1		2	1	3												34
124.0							1	1					1																3
135.0			1																		1								2
71.0							3	1					3																7
90.0						1							1																2
144.0				5		1	1	2	5	1		1	4		1														21
138.0							1	3				2	1																7
171.0	6	9	17	52	2	15	60	94	28	14	1	38	15	3	20	28	12	17	4	3	3	5	2		3	3		1	455
240.0				1												1													2
159.0		1					2	7	4	3	1	6	5				1	1				1							32
49.0												1																	1
163.0				1	1	1	1									1			2										7
53.0						1		2				1				1	1												6
69.0						1								1															2
58.0	1														2														3
162.0				1	1		1			2			1					1	2			1							10
169.0						1		1								2													4
202.0			1							1								1		2									5
177.5	1		1	1						1		1	1		2	1		2	1										12
185.0		2	4	1		9	7	5				1	2		2	3	1			1	3			2	7		2		52
207.0																									1		1		2
52.0									1																				1
153.0									2																				2
112.0									2																				2
188.0							1	1										2											4
157.0						1	1					1															1		4
225.6													1																1
208.0													2																2
225.5													1																1
192.0													1																1
191.0													2																2
215.0													1																1
187.0							1								1			1											3
161.0									1			1								1									3
70.0				4																						2	1		7
182.0				1											1			2											4
197.0			1			1		2					2	2	5	2	5	2	1										23
152.0									1								1												2

Type	Mgombani					Chombo				Mteza				Mtsengo									Mbuyuni						
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25	C26	C27	C28	Total
242.0													1				1												2
166.0												1			7			1		1									10
257.0															1														1
269.0															1														1
262.0															1														1
205.0															1														1
241.0										1		1														1			3
212.0													1					1											2
227.0																						1							1
226.0																						1							1
167.0															1		1												2
164.0								2	1			1		4	1	8	8	3	3			1							32
196.0						3	1	3					5		4			5			4			1	3	1	2		32
258.0															1	1	1												3
249.0														1	1	1													3
259.0																	1												1
234.0																	1												1
214.0																	1												1
168.0																1	1												2
132.0																2	1												3
256.0																1													1
195.0																1													1
172.0																1													1
210.0																3													3
158.0																1													1
247.0																		2					1						3
151.0														1															1
121.0														1															1
177.0														1															1
136.0																1		5	1	1									8
261.0																			1										1
176.0										1															1				2
209.0													2														1		3
233.0																		1											1
230.0																		1											1
244.0																		1											1
236.0																		1											1
189.0								1																			1		2
221.0													3															2	5
173.0																	2		1							1			4
220.0				1																					1			1	3
260.0													1												1				2
253.0															2	4	4										3	1	14
273.0															1											1			2
245.0																1										1			2
251.0																								1					1
232.0																								1					1
270.0																								1					1
264.0																								1					1
263.0																								1					1
193.0							1						2	2	2	23	11	26	9	1	7	2		6	50	41	64	18	265
248.0															1		1	2						3	9	3			19
250.0													1												1		1	1	4
246.0																1											2		3
126.0														1													2		3
217.0																								1	1				2
203.0													1				1					1		3	22	5			33
267.0																								1	2				3
206.0																										1			1
201.0																										1			1
204.0																								2	2		1		5
198.0																	2	2		1				1	14	9	18	2	49
271.0																									2	1			3
223.0																								1	7	2	1		11
255.0																									1				1
229.0																									1				1
254.0																									1				1
237.0																									1				1
200.0																									1				1
213.0																									1				1
272.0																									1				1
278.0																									1				1
277.0																									2				2
222.0																									1				1
279.0																									1				1
274.0																									1				1
275.0																									1				1
276.0																									1				1
225.0													1												4	1	9	1	16
265.0																									2	1	1		4
199.0																										1	1		2
266.0																												1	1
111.0																											1		1
211.0																											1		1
239.0																											2		2
252.0																											1		1
280.0																											1		1
231.0																											1		1
235.0																											1		1
238.0																											1		1
Plain	14	20	52	63	23	33	75	182	140	26	9	143	78	24	113	124	140	158	40	24	61	42	19	47	108	59	69	16	1902
Total	38	73	197	258	33	123	287	449	204	61	12	238	163	42	175	217	206	239	66	35	81	56	22	73	260	138	190	44	3980

Appendix G. Correspondence Analysis Statistics (after Iterative Removal)

Correspondence Analysis statistics: decoration type by site (after iterative removal)

Component	Iterations	Norm	Eigenvalue	% Inertia	Cumulative
1	14	0.013	0.371707	56.7	56.7
2	27	0.052	0.136848	20.9	77.5
3	13	0.068	0.098085	15.0	92.5

Qlt = Measure of plot quality (‰)
Mass = Weight of individual variables (relative to frequency of incidences)
Inr = Contribution to total inertia (‰)
Cor = Relative contribution to inertia (‰): contibution of specific axis to the inertia of a specific variable
Ctr = Absolute contribution to inertia (‰): contribution of specific variable to the inertia of a specific axis

* = Inertia Outliers

Site	Qlt	Mass	Inr	Comp1	Cor	Ctr	Comp2	Cor	Ctr	Comp3	Cor	Ctr
MGBNI	998	131	222	-678	413	162	665	397	423	-457	188	279
CHMBO	956	266	181	-514	593	189	-38	3	3	401	361	436
MTEZA	265	127	83	-282	186	27	-180	76	30	36	3	2
MTSGO	959	293	137	214	149	36	-412	556	364	-278	254	232
MBYNI	1000	182	377	1094	880	586	368	99	180	166	20	51

Average Type QLT: 836

Types	Qlt	Mass	Inr	Comp1	Cor	Ctr	Comp2	Cor	Ctr	Comp3	Cor	Ctr
t101	837	2	8	-873	370	5	108	6	0	975	462	24
t106	935	2	6	-997	455	5	983	443	14	-286	37	2
t108	985	2	3	-715	386	2	614	285	5	-646	314	7
t110	837	2	8	-873	370	5	108	6	0	975	462	24
t116	910	1	2	-978	517	1	847	388	3	-90	4	0
t123	842	1	4	-895	246	2	1036	329	6	-935	268	7
t124	884	1	2	-716	333	1	-231	35	0	892	516	7
t125	961	1	4	-1022	372	2	1164	482	8	-547	106	2
t126	994	1	2	1313	946	4	292	47	1	57	2	0
t127	976	5	11	-810	432	9	887	518	28	-196	25	2
t128	991	7	16	-765	408	11	-119	10	1	906	572	59
t129	988	17	39*	-804	423	29	-35	1	0	928	564	147
t131	999	2	14	-1010	271	7	1332	472	32	-980	256	24
t134	833	2	6	-881	406	4	168	15	0	888	412	15
t135	932	1	1	-381	82	0	342	66	0	-1174	783	8
t138	686	2	5	-679	277	2	-268	43	1	781	366	12
t140	996	2	4	-896	708	5	561	278	5	107	10	0
t141	1000	15	15	-693	722	19	429	277	20	29	1	0
t142	523	1	2	-787	216	1	655	149	2	-672	157	3
t143	969	8	18	-700	316	10	907	530	46	-438	124	15
t144	808	6	7	-741	713	8	191	47	2	192	48	2
t145	984	7	13	-882	671	15	600	310	19	-52	2	0
t147	189	4	13	-650	180	4	-47	1	0	142	9	1
t15	987	2	14	-1074	246	6	1526	497	33	-1068	244	22
t152	593	1	1	-246	77	0	-609	468	1	195	48	0
t157	848	1	1	-88	10	0	75	7	0	801	831	7

Types	Qlt	Mass	Inr	Comp1	Cor	Ctr	Comp2	Cor	Ctr	Comp3	Cor	Ctr
t159	445	9	18	-561	228	7	-319	74	7	445	144	18
t161	678	1	1	-318	151	0	-568	484	2	169	43	0
t162	651	3	2	-305	157	1	-243	99	1	-485	395	7
t163	637	2	2	-408	300	1	7	0	0	-433	337	4
t164	892	9	22	213	28	1	-1000	605	64	-654	259	38
t166	978	3	8	269	39	1	-1051	600	22	-789	338	17
t169	593	1	1	-246	77	0	-609	468	3	195	48	0
t170	890	9	6	-590	840	9	-37	3	0	140	47	2
t171	996	124	57*	-535	948	96	9	0	0	120	48	18
t173	900	1	2	711	401	1	-587	273	3	-535	226	3
t174	982	5	11	-848	449	9	776	375	20	-504	158	12
t175	994	6	16	-658	234	7	687	255	20	-968	506	55
t176	262	1	2	666	190	1	253	27	0	323	45	1
t177.5	865	3	4	-218	58	0	-230	64	1	-781	743	20
t178	1000	4	11	-936	507	10	859	427	22	-337	66	5
t179	940	5	19	-928	321	11	1036	400	36	-767	219	28
t180	911	1	3	-882	477	2	751	345	5	-381	89	2
t181	523	1	2	-787	216	1	655	149	2	-672	157	3
t182	870	1	2	-15	0	0	-386	107	1	-1032	763	12
t185	706	14	3	-70	33	0	168	190	3	268	483	10
t187	679	1	1	-47	2	0	-777	647	4	-166	30	0
t188	593	1	1	-246	77	0	-609	468	3	195	48	0
t189	947	1	1	476	172	0	445	151	1	905	623	5
t193	997	72	204*	1315	938	337	319	55	54	85	4	5
t196	973	9	3	278	393	2	-334	566	7	53	14	0
t197	940	6	10	61	4	0	-801	641	30	-544	295	19
t198	1000	13	71*	1647	782	98	779	175	59	385	43	20
t202	968	1	2	-105	13	0	-406	195	2	-802	760	9
t203	995	9	49*	1638	753	65	822	189	45	431	52	17
t209	48	1	4	290	27	0	6	0	0	254	21	1
t212	438	1	2	-56	2	0	-801	354	3	-387	82	1
t220	1000	1	3	825	297	2	1262	695	10	-134	8	0
t221	105	1	6	441	72	1	105	4	0	281	29	1
t225	984	4	26	1653	708	32	902	210	26	504	66	11
t240	932	1	1	-381	82	0	342	66	0	-1174	783	8
t241	48	1	4	290	27	0	6	0	0	254	21	1
t242	438	1	2	-56	2	0	-801	354	3	-387	82	1
t245	966	1	1	1072	937	2	-60	3	0	-180	26	0
t246	994	1	2	1313	946	4	292	47	1	57	2	0
t247	918	1	1	832	614	2	-411	150	1	-416	154	1
t248	1000	5	20	1490	862	31	550	118	12	231	21	3
t250	807	1	4	1230	586	4	624	151	3	426	70	2
t253	907	4	7	763	490	6	-512	220	7	-484	197	9
t260	262	1	2	666	190	1	253	27	0	323	45	1
t273	966	1	1	1072	937	2	-60	3	0	-180	26	0
t291	999	522	37	82	146	9	-183	722	127	-78	131	32
t50	995	2	17	-1031	214	6	1512	460	37	-1263	321	36
t53	993	2	1	-382	272	1	-504	475	3	363	246	2
t58	883	1	2	-137	14	0	-144	15	0	-1079	854	10
t59	923	4	12	-986	489	11	910	417	25	-181	17	1
t65	871	1	3	-951	575	3	657	274	4	184	22	0
t69	593	1	1	-246	77	0	-609	468	1	195	48	0
t70	998	2	7	133	7	0	1453	844	30	-607	147	7
t71	686	2	5	-679	277	2	-268	43	1	781	366	12
t75	981	1	8	-1058	278	4	1417	498	20	-912	206	12
t76	961	1	4	-1022	372	2	1164	482	8	-547	106	2
t83	848	1	2	-933	574	2	530	185	2	367	89	1
t84	831	1	3	-910	521	2	372	87	1	595	223	4
t85	882	2	5	-958	564	5	711	311	7	106	7	0
t87	848	1	2	-933	574	2	530	185	2	367	89	1
t88	842	1	4	-895	246	2	1036	329	6	-935	268	7
t89	910	1	2	-978	517	1	847	388	3	-90	4	0
t90	526	1	2	-652	224	1	-295	46	0	698	256	3
t92	991	1	2	-820	694	2	200	41	0	499	257	3
t93	974	12	15	-738	662	17	228	63	4	453	249	25
t94	895	6	14	-863	456	12	150	14	1	833	425	41
t95	961	1	4	-1022	372	2	1164	482	8	-547	106	2
t97	841	3	11	-865	339	7	55	1	0	1051	501	37

Average Unit QLT: 823

Variable Projections

Non-Zero Weight Type Coordinates in Input Order

Site	Component1	Component2	Component3
MGBNI	-1.112286	1.797222	-1.459817
CHMBO	-0.842726	-0.103325	1.279712
MTEZA	-0.461726	-0.487611	0.115864
MTSGO	0.350404	-1.113968	-0.889170
MBYNI	1.794183	0.994239	0.529338

Non-Zero Weight Unit Coordinates in Input Order

Type	Component1	Component2	Component3
t101	-1.431376	0.291556	3.114188
t106	-1.634902	2.656456	-0.912333
t108	-1.173002	1.661012	-2.061090
t110	-1.431376	0.291556	3.114188
t116	-1.603320	2.289489	-0.287528
t123	-1.468703	2.799469	-2.984111
t124	-1.173941	-0.625559	2.847401
t125	-1.677011	3.145746	-1.745406
t126	2.153471	0.787989	0.180415
t127	-1.328320	2.396605	-0.627085
t128	-1.255041	-0.321415	2.892108
t129	-1.319040	-0.095664	2.964236
t131	-1.656702	3.601158	-3.130227
t134	-1.445412	0.454652	2.836497
t135	-0.624825	0.923475	-3.750156
t138	-1.114425	-0.724495	2.493486
t140	-1.469937	1.517442	0.341366
t141	-1.136450	1.160188	0.092059
t142	-1.290859	1.770074	-2.145586
t143	-1.148073	2.452649	-1.398446
t144	-1.215782	0.517037	0.611902
t145	-1.446655	1.621414	-0.165765
t147	-1.065703	-0.128171	0.453533
t15	-1.761228	4.124325	-3.411552
t152	-0.403754	-1.645296	0.623479
t157	-0.144747	0.202740	2.558101
t159	-0.919666	-0.861813	1.421582
t161	-0.521612	-1.536235	0.538983
t162	-0.500405	-0.656234	-1.548284
t163	-0.669866	0.017718	-1.381080
t164	0.349646	-2.702270	-2.089621
t166	0.441534	-2.841990	-2.518236
t169	-0.403754	-1.645296	0.623479
t170	-0.967882	-0.099211	0.445987
t171	-0.878270	0.024779	0.384077
t173	1.166765	-1.586573	-1.706813
t174	-1.390927	2.096562	-1.607954
t175	-1.079677	1.857569	-3.092077
t176	1.092755	0.684763	1.030095
t177.5	-0.358059	-0.620618	-2.492368
t178	-1.534735	2.322229	-1.074586
t179	-1.521301	2.800579	-2.448271
t180	-1.447090	2.029781	-1.216557
t181	-1.290859	1.770074	-2.145586
t182	-0.025042	-1.043918	-3.294653
t185	-0.114449	0.454605	0.855591
t187	-0.077589	-2.100634	-0.530731
t188	-0.403754	-1.645296	0.623479
t189	0.780294	1.204178	2.888152
t193	2.156884	0.861257	0.270649
t196	0.456535	-0.902472	0.167973
t197	0.099339	-2.165569	-1.736018
t198	2.701194	2.106113	1.228019
t202	-0.171499	-1.098757	-2.561724
t203	2.687189	2.220861	1.375686

Type	Component1	Component2	Component3
t209	0.476061	0.017138	0.810060
t212	-0.091293	-2.164711	-1.234579
t220	1.353760	3.411179	-0.426922
t221	0.722739	0.284188	0.898074
t225	2.711576	2.437279	1.607685
t240	-0.624825	0.923475	-3.750156
t241	0.476061	0.017138	0.810060
t242	-0.091293	-2.164711	-1.234579
t245	1.758788	-0.161836	-0.574476
t246	2.153471	0.787989	0.180415
t247	1.364106	-1.111661	-1.329367
t248	2.444290	1.487860	0.736651
t250	2.017796	1.686201	1.360146
t253	1.251340	-1.383039	-1.545051
t260	1.092755	0.684763	1.030095
t273	1.758788	-0.161836	-0.574476
t291	0.134920	-0.493889	-0.248000
t50	-1.691008	4.086213	-4.032268
t53	-0.625765	-1.363097	1.158335
t58	-0.224970	-0.388120	-3.446487
t59	-1.618058	2.460740	-0.579103
t65	-1.559106	1.775734	0.587199
t69	-0.403754	-1.645296	0.623479
t70	0.218706	3.927993	-1.939151
t71	-1.114425	-0.724495	2.493486
t75	-1.735963	3.830751	-2.911709
t76	-1.677011	3.145746	-1.745406
t83	-1.529630	1.433232	1.170350
t84	-1.492785	1.005103	1.899290
t85	-1.571739	1.922521	0.337277
t87	-1.529630	1.433232	1.170350
t88	-1.468703	2.799469	-2.984111
t89	-1.603320	2.289489	-0.287528
t90	-1.069788	-0.798697	2.228049
t92	-1.345693	0.540460	1.593430
t93	-1.210519	0.617150	1.445353
t94	-1.415654	0.405184	2.659539
t95	-1.677011	3.145746	-1.745406
t97	-1.419094	0.148846	3.357167

Appendix H. Distribution of faunal materials from excavated sites

Contingency tables showing the number of observed bone fragments and individual shells by excavated site trench and stratigraphic context.

H.1. Mgombani 02

Mgombani 02 trenches 1,2 and 3

Mgombani 02	Trench	1	2				3				
Family	**Species** Context	4	2	7	11	12	3	5	6	16	**Total**
Bovini	*Bos taurus*	3						2	4		9
Caprini	*Caprini*		2				15		4		21
Cricetidae	*Cricetomys gambianus*					1		1	3		5
Gallus gallus	*Gallus gallus*							1	3		4
Gastropoda	*Achatina sp.*							7	15		22
Hystricidae	*Hystrix cristata*							1			1
Suidae	*Potamochoerus porcus*			1	1						2
	Unidentified			4	1	12	1	31	108	1	158
	Total	3	2	5	2	13	16	43	137	1	222

H.2. Mteza 01

Mteza 01 trenches 1, 2 and 3

Mteza 01	Trench	0	1					2	3		
Family	**Species** Context	0	1	2	9	25	26	3	5	7	**Total**
Bitis genera	*Bitis arietans*			3	1						4
Bivalva	*Anadara sp.*								1		1
Bovini	*Bos taurus*			1							1
Caprini	*Capra hircus*	1									1
	Caprini		6	2							8
Cephalophini	*Cephalophus harveyi*			2							2
	Sylvicapra grimmia deserti			2	1	1					4
Cercopithecidae	*Cercopithecus mitis albogularis*		1	1							2
Clariidae	*Clarias gariepinus*			4							4
Galagonidae	*Galago crassicaudatus agysymbatus*			2							2
Gastropoda	*Achatina sp.*								1	1	2
Giraffidae	*Giraffa camelopardalis*									1	1
Herpestidae	*Ichneumia albicaudata*			1							1
Hystricidae	*Hystrix cristata*		1								1
Leporidae	*Lepus capensis/crawshayi*			1							1
Macroscelididae	*Petrodromus tetradactylus sultan*			1							1
Mutelidae	*Aspatharia sp.*			1				1			2
Neotragini	*Neotragus moschatus*			7	5				1	1	14
Neritina sp.	*Neritina sp.*								4		4
Phasianidae	*Numida meleagris*			2							2
Testudinidae	*Kinixys belliana*			1							1
Thiaridae	*Thiara sp.*								2		2
Thryonomyidae	*Thryonomys swinderianus*			8	1						9
Tragelaphini	*Tragelaphus scriptus*	2	2	7	2				1	1	15
Unionidae	*Caelatura sp.*								39	13	52
Varanidae	*Varanus niloticus*			2							2
Viverridae	*Genetta tigrina rubiginosa*			2							2
	Unidentified		14	80	10	2	10	102			218
	Total	3	24	130	20	3	10	103	49	17	359

H.3. Chombo 01

Chombo 01 trenches 1, 2, 3 and 4

Chombo 01	Trench	0	1			2							3			4					
Family	**Species** Context	0	1	2	3	5	6	9	15	17	19	32	4	7	10	11	13	14	18	20	**Total**
Alcelaphini	*Aepyceros melampus*																	2			2
	Damaliscus lunatus topi				1												2	1			4
Bivalva	*Anadara sp.*																1				1
Boidae	*Python sebae*															1	5	1			7
Bovini	*Bos taurus*				1			1			1		1			3	1	8			16
Caprini	*Capra hircus*															2					2
	Caprini				3		6	1								6	45	41	17		119
	Ovis aries							1						1		3	30				35
Cephalophini	*Cephalophus adersi*																		2		2
	Cephalophus monticola								1				1			2					4
	Cephalophus sp.																	6	2		8
	Sylvicapra grimmia deserti	1					2									13	69	17	3		105
Cercopithecidae	*Cercopithecus mitis albogularis*				1		1									2	14	11	4		33
	Papio cynocephalus	1																			1
Colobinae	*Colobus polycomos palliatus*							1									1		1		3
Cricetidae	*Cricetomys gambianus*			1	1						1	1				2	13	16	5		40
Cypraeidae	*Cypraea sp.*																5				5
Equidae	*Equus quagga boehmi*														1						1
Felidae	*Felis serval*																1				1
Funisciuridae	*Paraxerus palliatus tanae*																	2	1		3
Galagonidae	*Galago crassicaudatus agysymbatus*																2	2			4
Gallus gallus	*Gallus gallus*															1	5				6
Gastropoda	*Achatina sp.*								2		1	2	1		1	1		2			10
Giraffidae	*Giraffa camelopardalis*															1					1
Herpestidae	*Ichneumia albicaudata*															1	2				3
Hippotragini	*Oryx gazella callotis*															3	2				5
Hominidae	*Homo Sapiens*								1												1
Hystricidae	*Hystrix cristata*						1														1
	Hystrix cristata																				1
Leporidae	*Lepus capensis/crawshayi*																5				5
Lethrinidae	*Lethrinus sp.*																5	2			7
Macroscelididae	*Petrodromus tetradactylus sultan*																3				3
	Rhynchocyon chrysopygus																4				4
Muridae	*Rattus rattus*																	2			2
Mutelidae	*Aspatharia sp.*																1	1	1		3
Neotragini	*Neotragus moschatus*														1						1
	Ourebia ourebi haggardi						1			1						2	30	33	21	2	90
Neritina sp.	*Neritina sp.*																3	3			6
Oryceropodidae	*Orycteropus afer*												1								1
Pelomedusidae	*Pelusios sp.*											1									1
Phasianidae	*Francolinus leucoscepus*	1							1							1					3
	Francolinus sephaena																1	4			5
	Numida meleagris															1	1				2
Pomatiasidae	*Tropidophora sp.*																1	2	1		4
Procavidae	*Dendrohyrax arboreus stulhmanni*										1										1
Reduncini	*Redunca redunca*																4		1		5
Shark	*Shark*															3	9		2		14
Sparidae	*Acanthopagrus berda*							1													1
	Argyrops sp.															2	2				4
Suidae	*Potamochoerus porcus*															1					1
	Potamochoerus porcus								1							5		11	3		20
Thiaridae	*Thiara sp.*																23				23
Thryonomyidae	*Thryonomys gregorianus*														1						1
	Thryonomys swinderianus							2								4	2	4	3		15
Tragelaphini	*Tragelaphus imberbis*																1	2			3
	Tragelaphus scriptus															1					1
Unidentified	*Unidentified*										1					8	54	22			85
Unionidae	*Caelatura sp.*	2		2		1		1													6
Varanidae	*Varanus sp. (exanthematicus?)*												11		3		5				19
Viverridae	*Genetta tigrina rubiginosa*							2								2	1		1		6
	Sarkidiornis melanotos																1				1
	Unidentified																1				1
			8	26	26	1	18	78	30		51	2				156	705	467	97		1580
	Total	5	8	29	33	2	29	88	36	1	56	6	15	1	7	227	1060	562	165	2	2340

H.4. Mtsengo 01

Mtsengo 01 trench 1

Mtsengo 01		0	trench 1													
Family	**Species** Context	0	1	2a	3a	6	8	29	39	46	57	58	64	67	68	**Total**
Acanthuridae	*Acanthurus sp.*									1						1
Bovidae	*Syncerus caffer*							1								1
Bovini	*Bos taurus*	45	17	13	24	3	2	80		58	86	22	94	17	4	465
Caprini	*Capra hircus*	10		15				13		14	2		3			57
	Caprini		2		15		1	54	1	18	28	6	19		1	145
	Ovis aries							15		14	3					32
Carangidae	*Alectis indicus*							1								1
	Carangoides sp.							1		1						2
Cephalophini	*Cephalophus adersi*				2						1		1			4
	Cephalophus harveyi							4								4
	Sylvicapra grimmia deserti	1		1			1	15	1	1	13	1	1			35
Cercopithecidae	*Cercopithecus mitis albogularis*	2			1			5			2	1	1			12
Coculidae	*Centropus superciliosus*						1									1
Cricetidae	*Cricetomys gambianus*				4		3	9		4	3	2	2			27
Cypraeidae	*Cypraea sp.*									8	3	2				13
Felidae	*Felis serval*												1			1
Gallus gallus	*Gallus gallus*							10		3	4	5	2			24
Haemulidae	*Plectorhinchus schotaf*							3		1		1				5
Herpestidae	*Herpestes ichneumon*												1			1
	Herpestes sanguineus							2			3					5
	Ichneumia albicaudata							1				1				2
	Mungos mungo										1					1
Labridae	*Labrid sp.*							2								2
Leporidae	*Lepus capensis/crawshayi*									2						2
Lethrinidae	*Lethrinus sp.*							20	1	8	1	3	1			34
Macroscelididae	*Petrodromus tetradactylus sultan*							3		2	3		3			11
	Rhynchocyon chrysopygus										1					1
Muridae	*Rattus rattus*				1			1								2
Neotragini	*Madoqua guentheri*							1								1
	Neotragus moschatus	2	2	6	9			27		21	34	1	30	1		133
	Ourebia ourebi haggardi									2		1				3
Phasianidae	*Francolinus leucoscepus*									5	3		1			9
	Numida meleagris			2	2			6		3	13					26
Procavidae	*Dendrohyrax arboreus stuihmanni*										1					1
Reduncini	*Redunca redunca*												1			1
Scaridae	*Scarus sp.*												1			1
Serranidae	*Epinephelus sp.*							2								2
Siganidae	*Siganus sutor*							7		4						11
Strigidae	*Bubo lacteus*									1						1
Suidae	*Potamochoerus porcus*			3	2			3		3						11
Thryonomyidae	*Thryonomys gregorianus*			2	1			3		1						7
	Thryonomys swinderianus										10					10
Tragelaphini	*Tragelaphus scriptus*	1		1				1		2	2					7
Viverridae	*Genetta tigrina rubiginosa*								1					1		2
	Vivera civetta							2								2
	Unidentified		64	111	226	16	1	784	18	176	378	21	409	12	20	2236
	Total	61	85	154	287	19	9	1076	22	353	595	67	571	31	25	3355

Mtsengo 01 trench 2

Mtsengo 01		Trench 2																
Family	**Species** / **Context**	**1b**	**2b**	**3b**	**14**	**16**	**30**	**31**	**40**	**44**	**48**	**49**	**51**	**53**	**59**	**61**	**65**	**Total**
Bovini	*Bos taurus*	43	25	38	28		15	28	28	4	8	1			54	13		285
Caprini	*Capra hircus*	5	4	2	1		1	3			2				1	2		21
	Caprini	6	17	22	8	1	1	10	13	3	3					6		90
	Ovis aries		5					4										9
Cephalophini	*Cephalophus adersi*		1	2											4			7
	Cephalophus monticola	5	1						1							2		9
	Sylvicapra grimmia deserti	1			2		1		1	2	1			1		1		10
Cercopithecidae	*Cercopithecus mitis albogularis*	1	2	1														4
Cricetidae	*Cricetomys gambianus*	1			2				1				1		2			7
Cypraeidae	*Cypraea sp.*								1									1
Gallus gallus	*Gallus gallus*	5						2	3		2				1			13
Gastropoda	*Achatina sp.*															2		2
Herpestidae	*Herpestes ichneumon*			1														1
	Mungos mungo				1													1
Leporidae	*Lepus capensis/crawshayi*														1			1
Lethrinidae	*Lethrinus sp.*						1	1	2									4
Macroscelididae	*Petrodromus tetradactylus*								1							1		2
	Rhynchocyon chrysopygus														1			1
Neotragini	*Neotragus moschatus*	1	2	1	1		3	2	8		3				1			22
Neritidae	*Nerita sp.*															1		1
Phasianidae	*Numida meleagris*		4	6	2					1					3			16
Procavidae	*Dendrohyrax arboreus stulhmanni*			1				1										2
Sciuridae	*Heliosciurus rufobrachium undulatus*		1												1			2
Serranidae	*Epinephelus sp.*														1			1
Siganidae	*Siganus sutor*	1	1															2
Suidae	*Potamochoerus porcus*	1						1	1									3
Thryonomyidae	*Thryonomys swinderianus*														1			1
Tragelaphini	*Tragelaphus scriptus*														1			1
Unidentified	**Unidentified**	281	203	187	133	5	93	119	74		11		2	1	326	114	2	1551
	Total	351	266	261	178	6	117	171	136	10	30	1	3	1	398	142	3	2074

Mtsengo 01 trench 3

		Trench 3								
Family	**Species** / **Context**	**1c**	**2c**	**17**	**19**	**21**	**36**	**42**	**43**	**Total**
Bovini	*Bos taurus*	7	58	40	3		41	7		156
Caprini	*Capra hircus*		3				8	3		14
	Caprini	1	19	13		5	16	1	6	61
Cephalophini	*Cephalophus adersi*						3			3
	Cephalophus monticola		2	4						6
	Sylvicapra grimmia deserti		1	7						8
Cercopithecidae	*Cercopithecus mitis albogularis*			1						1
Cricetidae	*Cricetomys gambianus*		1					1		2
Felidae	*Panthera pardus*		4							4
Gallus gallus	*Gallus gallus*			1						1
Macroscelididae	*Rhynchocyon chrysopygus*						1			1
Neotragini	*Madoqua guentheri*			2						2
	Neotragus moschatus						5			5
Phasianidae	*Francolinus leucoscepus*						1			1
	Numida meleagris			1						1
Suidae	*Potamochoerus porcus*		2							2
Thryonomyidae	*Thryonomys swinderianus*		1							1
Tragelaphini	*Tragelaphus scriptus*			1						1
	Unidentified	6	242	204	6	1	141	124		724
	Total	14	333	274	9	6	216	136	6	994

H.5. Mbuyuni 01

Mbuyuni 01 trenches 1 and 3

Mbuyuni 01		Surface	Trench 1										Trench 3		
Family	**Species** Context	0	1a/b	2	11	14	17	19	22	23	24	26	1d	3	Total
Acciptridae	*Terathopius ecaudatus*						1								1
Alcelaphini	*Alcelaphus buselaphus*	16	1		2		8		2					4	33
Bitis genera	*Bitis arietans*									1					1
Bovini	*Bos indicus*							1							1
	Bos taurus	147	7	25	54	5	121		21	19				86	485
Canidae	*Canis familiaris*	1													1
Caprini	*Capra hircus*	5	7	10	1	2	17		5						47
	Caprini	2		9	8		17	1							37
	Ovis aries	1		3	1		1							2	8
Cephalophini	*Cephalophus adersi*	1													1
	Cephalophus monticola				2		8								10
	Sylvicapra grimmia deserti	1	4	9	19	1	23		5	1	1			3	67
Cercopithecidae	*Cercopithecus aethiops*		1		1										2
	Cercopithecus mitis albogularis	1		1	5		10		1						18
	Papio cynocephalus	1	1												2
Cichlidae	*Oreochromis spillurus*						3								3
Clariidae	*Clarias gariepinus*	2					5								7
Colobinae	*Colobus polycomos palliatus*			1			1			3					5
Columbiformes	*Columba guinea*					1									1
Cricetidae	*Cricetomys gambianus*	2			9		10			2					23
Cypraeidae	*Cypraea sp.*	1	1												2
Equidae	*Equus quagga boehmi*	6		10		1	3							2	22
Galagonidae	*Galago crassicaudatus agysymbatus*						2								2
Gallus gallus	*Gallus gallus*		1	8	1		5							1	16
Gastropoda	*Achatina sp.*	1					2								3
Gerbillinae	*Tatera robusta*						1								1
Giraffidae	*Giraffa camelopardalis*			1	1										2
Haemulidae	*Plectorhinchus schotaf*				1										1
Herpestidae	*Herpestes ichneumon*					1									1
	Herpestes sanguineus									1					1
	Ichneumia albicaudata			1	2		4								7
Hippopotamidae	*Hippopotamus amphibius*	1													1
Hominidae	*Homo Sapiens*		1	2	3		1								7
Hystricidae	*Hystrix cristata*	2					5		1						8
Macroscelididae	*Petrodromus tetradactylus sultan*						3								3
	Rhynchocyon chrysopygus						1								1
Muridae	*Rattus rattus*				2		1								3
Mutelidae	*Aspatharia sp.*	1		2			1								4
Neotragini	*Neotragus moschatus*	3	1	6	5		7		2	1					25
	Ourebia ourebi haggardi	2					5								7
Pelomedusidae	*Pelusios sp.*	1													1
Phasianidae	*Francolinus leucoscepus*				4		8								12
	Numida meleagris		1	2	7				2						12
Portunidae	*Scylla serrata*		1	5	7		9					1		1	24
Procavidae	*Dendrohyrax arboreus*						1								1
Reduncini	*Redunca redunca*	19	1		3	1				1				1	26
Scaridae	*Scarus rubroviolaceus*						1								1
Serranidae	*Epinephelus sp.*			1	1										2
Subulinidae	*Pseudoglessula sp.*	2					1								3
Suidae	*Phacochoerus aethiopicus*	5					8							1	14
	Potamochoerus porcus	4		1	4		8		1			1		1	20
Syodontidae	*Synodontis zanzibaricus*				2										2
Testudinidae	*Testudo sp.*								1						1
Thryonomyidae	*Thryonomys gregorianus*			1	4		5							1	11
Tragelaphini	*Tragelaphus imberbis*	1													1
	Tragelaphus scriptus	1		12	8	1	15							10	47
Viverridae	*Genetta tigrina rubiginosa*						1								1
	Funisciurus palliatus						1								1
	Pounices flemngiana					1									1
	Unidentified	21	45	59	283		1206	2	119	93	4	22	1	136	1991
	Total	251	73	169	440	14	1530	4	160	122	5	24	1	249	3042

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